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# PERSPECTIVES

ON LABOUR AND INCOME

**SPRING 2006**

Vol. 18, No. 1

- EDUCATION AND INCOME OF LONE PARENTS
- SHIFTS IN SPENDING PATTERNS OF OLDER CANADIANS
- RECENT CHANGES IN EMPLOYMENT BY INDUSTRY
- ON THE ROAD AGAIN
- AGING, HEALTH AND WORK
- DISABILITY IN THE WORKPLACE
- FACT SHEETS:  
*The labour market in 2005*  
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ON LABOUR AND INCOME

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*Diane Galarneau*

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### 19 Shifts in spending patterns of older Canadians

*Raj K. Chawla*

As households age and labour market attachment diminishes, income, savings and wealth generally become less. Households also become smaller as adult children leave or a spouse dies. And spending patterns change. Using 'similar households, this study looks at changes in spending patterns for households headed by persons aged 55 or older in 1982 and 2003.

### 31 Recent changes in employment by industry

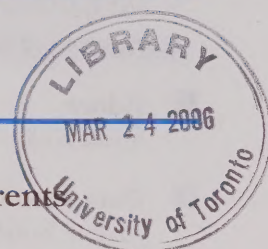
*Vincent Ferrao*

Over the last three years, low interest rates have spurred a surge in home construction, and strong world demand has stimulated natural resource industries. At the same time, a soaring loonie has created challenges for Canadian manufacturing. This article examines these three industries, looking at the labour market impact in the resource-rich western provinces and the large manufacturing base in central Canada.

### 37 On the road again

*Vincent Dubé and Denis Pilon*

Trucking plays a major role in Canada's economy. But because of the sector's steady growth, an aging workforce, and the declining popularity of the occupation, the industry may soon face a shortage of qualified truckers. A recent overall picture of truck drivers based on various sources is presented.





# PERSPECTIVES

ON LABOUR AND INCOME

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## 48 Aging, health and work

Wendy Pyper

While the majority of Canadians aged 50 to 69 not in the labour force were retired in 2003, nearly half a million were not working for health-related reasons. The Canadian Community Health Survey is used to compare the health of working individuals aged 50 to 69 with their contemporaries who are not working, whether for health or other reasons. Chronic conditions and lifestyle choices are also examined.

## 59 Disability in the workplace

Cara Williams

Employment equity and human rights legislation ensures access to the labour market for those with disabilities. Accommodating them in their job and in the workplace is an important part of the issue. A look at the types and severity of disabilities experienced by those aged 15 to 64 in the labour force, and a comparison of some of their characteristics with the non-disabled population.

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*The quarterly for labour market and income information*



# Forum

*From the Managing Editor*

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Beginning with this issue, *Perspectives* cover will showcase original artwork and photographs by Statistics Canada personnel. The four graphics appearing over the next year were selected from 130 entries to our “*Perspectives* Cover Contest.”

- Our spring cover is from **Anne-Marie Kirouac**’s (Advisory Services) lifelike painting of a woman picking lilacs.
- **Julie Savoie**’s (Administrative Support Services) beautiful photo of a field of sunflowers has been chosen for the summer cover.
- **Gregory Phillips**’s (Special Surveys) evocative photo of a vine-shrouded doorway that is no longer used will grace the cover of the autumn issue.
- **Daniel Dekoker**’s (Culture, Tourism and the Centre for Education Statistics) moving photo of a sun breaking free of clouds over an icy Lake Memphremagog will appear on the winter cover.

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# Highlights

## *In this issue*

### ■ Education and income of lone parents

... p. 7

- The characteristics of lone parents changed greatly from 1981 to 2001. They were older on average, had slightly fewer children, and were much more educated.
- These changes gave rise to a sizeable increase in employed lone mothers as well as the proportion working full time. As a consequence, their average employment income rose 35% in real terms and their low-income rate declined by 9 percentage points, to 43%.
- These improvements did not extend to lone mothers aged 25 to 34 who had not finished high school. They saw their average earnings decline and their low-income rate rise substantially.
- For lone fathers, the increase in educational attainment did not have the same consequences. The proportion employed or employed full time declined over the period. Their earnings also fell, particularly for the youngest and least educated.
- Full-time work lessens the chances of being in low income. In 2000, 14% of lone mothers working full time throughout the year had a low income, compared with 62% of those with a different work pattern or not in the labour market. For lone fathers, the proportions were 7% and 38% respectively.

### ■ Shifts in spending patterns of older Canadians

... p. 19

- Households with a reference person aged 55 and older were spending more of their income dollar on personal consumption and income tax in 2003 than in 1982. As a result, their savings fell to 4 cents per dollar from 13 cents.

- As households age, income drops steeply because of loss in earnings whereas the drop in personal consumption is more gradual.
- Couples exhibited spending patterns closer to those of unattached men rather than women. Among unattached individuals, the spending gap between men and women narrowed between 1982 and 2003—largely because of improved income levels for older women.
- Older households spent more on health in 2003 than in 1982. Most of the money went for prescription drugs, other medical equipment and services, and dental and eye care.
- Older households receiving all of their income from government transfers spent most of their consumption dollar on shelter and food, ranging from 52 to 57 cents in 2003 and 58 to 65 cents in 1982. In both years, those in the 75-plus group spent more on gifts and contributions than on personal care or recreation.

### ■ Recent changes in employment by industry

... p. 31

- Overall labour market conditions continued to improve in 2005. Employment grew by 1.6%, slightly more than in the previous year, with all of the increase in full-time jobs. The unemployment rate hit its lowest level in over 30 years toward the latter part of the year.
- Since the end of 2002, jobs in manufacturing have fallen sharply, down 149,000 (-6.4%). The 2005 drop was experienced in most provinces, but especially in Quebec and Ontario.
- Times have seldom been better for construction, which has been boosted by low interest rates. In the last three years alone, employment rose by about 19%. The gains were particularly strong in British Columbia (50%) and Quebec (21%).

- Since the end of 2002, employment in natural resources has risen by just under 40,000, an increase of about 15%. The growth was led by Alberta's oil and gas industry, where employment has jumped by about 30% in the last three years.

## ■ On the road again ... p. 37

- Nearly 271,000 people, almost all men, worked as truck drivers in 2004. About four in five were wage earners, while the others were self-employed.
- Truck drivers constitute a relatively older workforce; about 18% were 55 or older, compared with 13% of workers overall. They also have less education than the average; more than a third did not have a high school diploma, compared with only 14% for all workers. In addition, their ranks contain a smaller proportion of immigrants.
- Truck drivers earn close to the average but have fewer benefits, particularly a pension plan. They also work much longer hours, often according to irregular schedules. In 2004, wage-earning truckers worked an average of 47 hours per week, with 38% clocking 50 hours or more. Those who were self-employed put in 49 hours, with 70% working 50 or more.

## ■ Aging, health and work ... p. 48

- Older workers were generally in very good or excellent physical and mental health. However, those not working because of ill health rated their physical and mental health as fair or poor. Chronic conditions such as arthritis and rheumatism, high blood pressure, and back problems were common concerns.
- Of those not working for health reasons, 7 in 10 older men and 9 in 10 women suffered from three or more chronic conditions. These rates were much higher than in the working population.
- Older workers had virtually no mobility problems—unlike those not working because of their health. Half of women aged 50 to 54 not working for health reasons had mobility problems.
- Compared with 87% of working men aged 50 to 54, only 25% of those not working because of ill health reported no day-to-day pain. Almost all of those in ill health who experienced pain reported moderate to severe pain levels.

## ■ Disability in the workplace ... p. 59

- In 2001, almost two million Canadians between the ages of 15 and 64 reported having a disability. About 45% of these individuals were in the labour force.
- Labour force participation decreases as the degree of disability increases. For example, the participation rate for those with only a mild disability was 63%, but it fell to just 28% for those with a severe or very severe disability.
- Among the working-age population (15 to 64), the overall disability rate was about 10%. While the rate for those 15 to 24 was about 4%, it rose to about 9% for those 25 to 54, and almost 22% for those 55 to 64.
- The most common accommodations needed in the workplace by those with a disability were modified or reduced work hours (23%) and job redesign (22%). Only a few required structural changes such as workstation modification (7%) or accessible washrooms (4%).
- Of the 571,000 individuals with disabilities in the potential pool of labour, three-quarters required some type of workplace accommodation in order to permit them to work.

## ■ What's new? ... p. 68

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Emerging patterns in the labour market: A reversal from the 1990s

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Cross-country growth and inequality correlation

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Male-female wage differentials

Training and the earnings of immigrant men

### Perspectives



# Education and income of lone parents

Diane Galarneau

**B**etween 1981 and 2001, the proportion of lone-parent families went from 11% to 16%. These families also accounted for more children 18 and under in 2001—21% compared with 14% in 1981. Being a parent is not easy, and heads of lone-parent families face the same challenges as other parents but often with less financial resources. In 2000, the before-tax annual income of two-parent families was nearly \$78,800, compared with only \$27,700 for lone mothers and just under \$44,000 for lone fathers.<sup>1</sup>

While lone mothers in 2000 were almost five times more likely to have a low income than mothers with spouses (43% versus 8%), the proportion was lower than in 1980 (52%). However, improvements were not observed for all age groups or education levels. And, among lone fathers, who represent a growing portion of heads of lone-parent families, low income increased, going from 16% to 20%. For them also, the pattern was not uniform. Even though their low-income rate was half the rate for lone mothers, it was more than double that for fathers with spouses (8%).

Low income has a major impact on many aspects of life, including well-being, work, friendships, health, and even longevity and crime. It is also likely to influence the future of children in affected families, reducing their chances of going on to postsecondary education (Acemoglu and Pischke 2001). This in turn may limit their future earnings potential and with it their chances of escaping from low income.

Using the 1981 and 2001 Censuses, this article examines changes in the characteristics of lone parents. It looks at their earnings and the proportion in low income by age group and education level, and compares them with parents living in a couple relationship. Changes in low-income rates for full-time, full-year workers are also examined (see *Data source and definitions*).

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## Women heading lone-parent families

### ***A phenomenal increase in educational attainment***

The increase in lone-parent families has led to a sizeable rise in the number of lone mothers since 1981. In 1981, there were 330,000 lone mothers aged 25 to 54 with children aged 18 or under, compared with 555,000 in 2001, an increase of 68%. In comparison, the number of mothers in couple relationships rose 3% to 2,788,000 (Table 1).

The profile of mothers changed greatly during this period. Like the rest of the population, they were slightly older than in 1981. The average age of lone mothers rose 0.9 years compared with 1.8 for mothers with spouses. In addition to general population aging, other factors probably contributed to the aging of mothers. These include the later entry of women into conjugal relationships and having a first child later in life (Zukewich and Cooke-Reynolds 2003). Lone mothers had fewer children than mothers in couple relationships, although the average declined for both groups. Lone mothers were still more likely to have only one child (half compared with one-third for women in couple relationships), and large families were less common in 2001 for both groups.

One of the most marked changes was women's educational attainment. In 1981, 46% of lone mothers (compared with 42% of those with spouses) had not completed high school. By 2001, this proportion had fallen by more than half to 22% (17% for mothers in couple relationships), mainly in favour of high school completion and university education. A majority of all mothers had studied at the postsecondary level, in both 1981 and 2001. But overall, lone mothers had less education than mothers with spouses in 2001.

To a large extent, these trends were observed in all age groups. However, the increase in educational attainment was less pronounced for lone mothers aged 25 to 34. In 1981, they had a higher education level than older lone mothers, whereas in 2001, they were

substantially behind: more than one-quarter had not yet completed high school and only 6% had a university degree.

This slower advance changed the relative situation of young lone mothers, who had now lost their educational advantage. Moreover, a sizeable gap is evident between them and their counterparts in couple relationships, for whom the proportion of university graduates (18%) was three times higher in 2001. The gap was also sizeable for those aged 35 to 44 years, but it narrowed among those 45 to 54.

These educational gaps between lone mothers and those in couple relationships could be explained by the young age of lone mothers when they had their first child.<sup>4</sup> Also, most in 2001 (61%) had never been married,<sup>5</sup> and may have taken care of their children without the presence or support of a spouse. These two factors may have been decisive in determining whether to continue their education. Nevertheless, given the narrowing of the education gap with age, one cannot rule out the possibility that young lone mothers may eventually catch up.

The opposite is observed for the oldest group (45 to 54). In 2001, both lone mothers and those with spouses had the largest proportion of university graduates and the lowest proportion of women with no high school diploma. Being older, the women in this group had had more time to pursue their education, but the phenomenal increase in their education level might also mask a cohort effect. The increase more likely reflects the greater value placed on education by those

**Table 1 Profile of lone mothers and mothers in couples**

	Lone mothers		Couple mothers	
	1981	2001	1981	2001
<b>Total</b>	<b>330</b>	<b>555</b>	<b>2,698</b>	<b>2,788</b>
<b>Average age</b>	<b>37.8</b>	<b>38.7</b>	<b>36.9</b>	<b>38.7</b>
<b>Education</b>				
Less than high school diploma	45.8	21.9	42.1	16.6
High school diploma	1.9	14.2	2.0	17.2
Postsecondary, completed or not	48.2	52.3	52.2	46.8
Bachelor's or higher	4.1	11.6	3.7	19.4
<b>25 to 34</b>	<b>128</b>	<b>158</b>	<b>1,178</b>	<b>772</b>
Less than high school diploma	39.8	25.6	34.0	16.4
High school diploma	2.0	12.5	2.2	13.8
Postsecondary, completed or not	54.8	55.7	59.9	52.0
Bachelor's or higher	3.3	6.2	3.9	17.9
<b>35 to 44</b>	<b>127</b>	<b>278</b>	<b>1,011</b>	<b>1,440</b>
Less than high school diploma	44.8	21.5	44.7	16.7
High school diploma	2.0	15.0	1.8	18.6
Postsecondary, completed or not	47.9	52.6	49.4	46.3
Bachelor's or higher	5.3	10.8	4.1	18.4
<b>45 to 54</b>	<b>76</b>	<b>119</b>	<b>509</b>	<b>576</b>
Less than high school diploma	57.5	18.0	55.9	16.7
High school diploma	1.6	14.7	1.6	18.2
Postsecondary, completed or not	37.5	46.8	40.0	41.2
Bachelor's or higher	3.5	20.5	2.4	23.9
<b>Children under 19</b>				
One	47.2	51.3	31.9	35.7
Two	34.3	34.6	43.1	44.4
Three	12.9	10.7	18.0	15.2
Four and more	5.6	3.4	7.0	4.7
Average number of children	1.8	1.7	2.0	1.9
<b>Labour market activity</b>				
Employed	58.7	71.1	50.9	75.0
Unemployed	6.0	7.9	4.2	4.3
Not in the labour force	35.3	21.0	44.9	20.7
<b>Work arrangements</b>				
Mostly full-time	50.8	60.8	36.5	58.0
Mostly part-time	15.2	17.1	23.1	23.8
Did not work	34.0	22.1	40.4	18.2
Mostly full-time, full-year	32.1	40.3	21.0	40.2

Source: Census of Population, 1981 and 2001

at the beginning of the baby-boom generation, born between 1947 and 1956 (aged 45 to 54 in 2001), compared with the cohort born between 1927 and 1936 (45 to 54 in 1981).



### **Employment rate up, but the youngest trail behind**

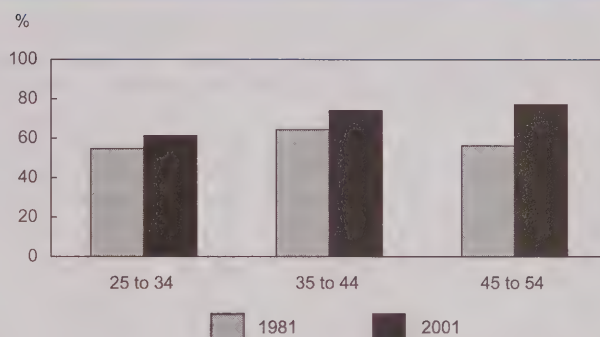
This increased education level is coupled with an equally substantial increase in the proportion of women classified as employed or employed mainly full time, especially among mothers in couple relationships since their attachment to the labour market was weaker in 1981. In 2001, 71% of lone mothers and 75% of mothers in couple relationships had a job, and for most, a full-time one.

However, the youngest (25 to 34) trailed their older counterparts, both in their employment rate in 2001 and the progress observed with respect to it over the 20 years (Chart A). In 2001, 61% had a job, compared with 77% of their counterparts aged 45 to 54. In 1981, the percentages were 55% and 56% respectively.

Also, a smaller proportion of these young lone mothers worked full-time, or full-time for the full year (Chart B), and the increase was less than for their older counterparts.

The unemployment rate for lone mothers rose slightly, from 9.3% in 1981 to 10.0% in 2001 (Chart C), while the rate for mothers in couples fell from 7.7% to 5.4%. The unemployment rate increased more for the youngest lone mothers with little education (from 16.2% to 21.6%) and for all lone mothers with little education (from 11.7% to 16.2%). According to a recent longitudinal study, lone mothers have a greater risk of being chronically unemployed (Brooks 2005).

**Chart A The employment rate for young lone mothers rose less markedly.**



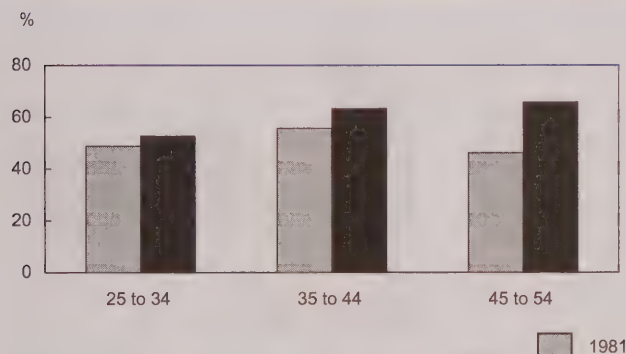
Source: Census of Population, 1981 and 2001

### **Annual employment earnings higher but the increase was not uniform**

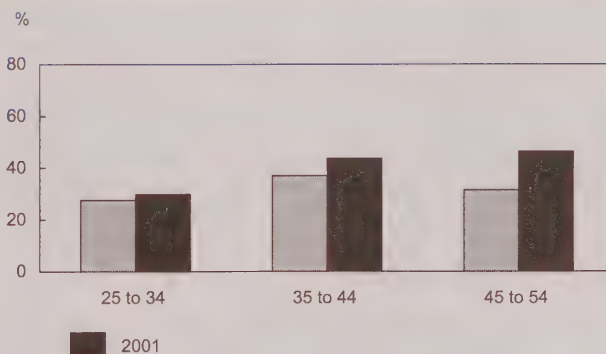
Income generally rises with age and education. Given lone mothers' increased participation in the labour market, their aging, and the major increase in their educational attainment since 1980, one would expect an increase in their employment earnings—and this in fact happened. Their annual earnings rose 35%<sup>6</sup> in real terms between 1980 and 2000, going from \$14,700 to \$19,900<sup>7</sup> (Table 2).

However, the increase was not universal. In particular, the youngest group registered sizeable losses for most education levels. This decline in earnings may be

**Chart B Young lone mothers saw less of a rise... in full-time work**



**and in full-time, full-year work**



Source: Census of Population, 1981 and 2001



**Table 2 Earnings of lone mothers and those in couples**

	Lone mothers			Couple mothers			Gap Lone: couple	
	1980	2000	Change	1980	2000	Change	1980	2000
	2000\$		%	2000\$		%	%	
<b>Total</b>	<b>14,700</b>	<b>19,900</b>	<b>35.0**</b>	<b>11,100</b>	<b>22,700</b>	<b>103.6**</b>	<b>24.4</b>	<b>-14.1</b>
<b>Education</b>								
Less than high school diploma	8,600	10,000	16.6**	7,900	12,600	59.7**	8.3	-25.6
High school diploma	15,500	17,600	14.0**	9,900	17,800	79.1**	35.7	-1.0
Postsecondary, completed or not	19,100	20,300	6.3**	13,400	21,800	62.5**	29.9	-7.2
Bachelor's or higher	36,500	39,100	7.1**	23,400	37,700	61.2**	35.9	3.6
<b>25 to 34</b>	<b>12,500</b>	<b>12,900</b>	<b>3.2**</b>	<b>10,500</b>	<b>17,500</b>	<b>66.9**</b>	<b>16.0</b>	<b>-35.7</b>
Less than high school diploma	7,100	6,900	-2.6	7,100	9,400	32.8**	0.8	-35.4
High school diploma	13,800	11,400	-16.9**	9,200	13,100	43.5**	33.5	-14.9
Postsecondary, completed or not	15,900	14,400	-9.8**	12,200	17,200	40.5**	23.2	-19.6
Bachelor's or higher	28,300	26,600	-6.0**	20,700	29,000	39.8**	26.8	-8.9
<b>35 to 44</b>	<b>17,300</b>	<b>21,100</b>	<b>21.7**</b>	<b>12,400</b>	<b>23,800</b>	<b>92.2**</b>	<b>28.4</b>	<b>-13.0</b>
Less than high school diploma	10,000	11,300	12.7**	8,900	13,800	54.6**	11.2	-21.9
High school diploma	17,500	18,700	6.8**	11,300	18,800	67.0**	35.5	-0.8
Postsecondary, completed or not	21,500	21,900	2.3**	14,700	23,300	59.0**	31.7	-6.2
Bachelor's or higher	40,100	39,400	-1.8	25,800	39,200	51.6**	35.6	0.6
<b>45 to 54</b>	<b>14,200</b>	<b>26,400</b>	<b>85.7**</b>	<b>10,200</b>	<b>26,700</b>	<b>163.1**</b>	<b>28.4</b>	<b>-1.4</b>
Less than high school diploma	8,500	12,100	42.4**	7,300	13,600	85.8**	13.6	-12.7
High school diploma	16,000	22,100	38.3**	10,000	19,900	99.6**	37.7	10.0
Postsecondary, completed or not	21,100	25,500	21.2**	13,900	25,300	82.0**	34.0	1.0
Bachelor's or higher	41,000	43,700	6.7*	27,400	43,600	59.0**	33.2	0.4

\* Significant at the 10% level.

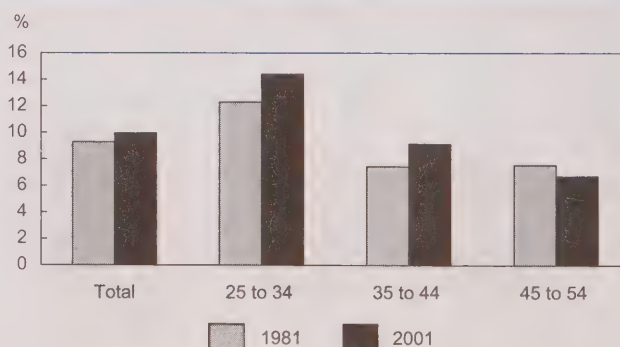
\*\* Significant at the 5% level.

Note: These averages include nil and negative earnings.

Source: Census of Population, 1981 and 2001

attributed to various factors, including the loss of their educational advantage and the rise in their unemployment rate. Their low employment rate and the small proportion working full time, or full time for the full year, also played a part. In addition, jobs held by young lone mothers in 2001 were less likely to require specific skills. Just over 54% had a job requiring at most a high school diploma, compared with 47% and 40% of their counterparts aged 35 to 44 and 45 to 54 respectively (Chart D). Also, temporary jobs, which are generally less well-paid than permanent ones, are more likely to be held by women, youths, and persons with little education (Galarneau 2005). This type of work may thus be more common among young lone mothers with little education.

The lower employment rate for young lone mothers and their stronger inclination toward part-time work compared with older lone mothers may be partly

**Chart C A sizeable gap in unemployment rates has opened between young and older lone mothers.**

Source: Census of Population, 1981 and 2001

**Chart D Young lone mothers are often in jobs requiring few skills.**

Source: Census of Population, 1981 and 2001

explained by their being young and having small children. Large gaps were also evident between young lone mothers and their counterparts in couple relationships. However, on average, they had fewer children and their youngest child was older. Being young when their first child was born and not having the support of a spouse may have been determining factors for many in deciding whether to continue their studies—25% did not have a secondary school diploma in 2001. Lack of education probably had a large influence on their labour market performance as well as their earnings. These factors may have affected all lone mothers with little education. In a knowledge economy, where employers increasingly require specific skills and where the number of highly qualified persons is mounting, young people with little education are inevitably disadvantaged.

As for mothers in couple relationships, their earnings reached \$22,700 in 2000, up 104% from

1980, or three times the growth for lone mothers. This may be partly due to the lower earnings of mothers in couple relationships in 1980, which was in turn attributable to their weak attachment to the labour market. When this attachment subsequently strengthened, the trends were reversed, with mothers in couple relationships then having, on average, higher earnings than lone mothers.

### ***Worsening situation of young lone mothers confirmed by low-income rates***

The improvement in employment earnings resulted in a decrease in the low-income rate for lone mothers. The rate went from 52% to 43% between 1980 and 2000, with older and relatively educated women being the main beneficiaries.

Young lone mothers (apart from university graduates) generally saw their low-income rate deteriorate. Note that these rates were already disproportionate in 1980 (Table 3). However, the rate declined with education

**Table 3 Low-income rates for lone mothers and those in couples**

	Lone mothers		Couple mothers	
	1980	2000	1980	2000
	%			
<b>Total</b>	<b>51.8</b>	<b>43.0</b>	<b>9.3</b>	<b>8.0</b>
<b>Education</b>				
Less than high school diploma	60.4	63.6	12.3	17.0
High school diploma	48.9	43.3	8.9	8.9
Postsecondary, completed or not	46.0	39.5	7.2	6.6
Bachelor's or higher	25.8	19.1	3.7	3.0
<b>25 to 34</b>	<b>63.5</b>	<b>59.0</b>	<b>10.6</b>	<b>10.7</b>
Less than high school diploma	73.5	75.2	14.6	22.4
High school diploma	61.5	62.3	10.2	13.3
Postsecondary, completed or not	57.9	54.0	8.8	8.8
Bachelor's or higher	37.8	30.6	4.9	3.6
<b>35 to 44</b>	<b>47.1</b>	<b>40.1</b>	<b>8.3</b>	<b>7.4</b>
Less than high school diploma	58.2	60.0	11.4	15.5
High school diploma	42.9	40.4	8.4	8.1
Postsecondary, completed or not	39.6	35.8	6.0	5.9
Bachelor's or higher	21.9	20.3	2.9	2.9
<b>45 to 54</b>	<b>39.8</b>	<b>28.5</b>	<b>8.0</b>	<b>6.0</b>
Less than high school diploma	47.7	51.7	10.5	13.5
High school diploma	34.6	28.7	5.7	6.3
Postsecondary, completed or not	30.0	26.2	4.8	4.7
Bachelor's or higher	16.4	13.0	2.6	2.7

Source: Census of Population, 1981 and 2001



## Data source and definitions

This study uses census microdata representing 20% of the population. It concerns lone parents and parents in couple relationships who have children aged 18 and under. Only persons aged 25 to 54 were selected to avoid school-work or work-retirement transition situations when employment income is usually lower. Men accounted for 19% of lone parents in this age group. Since their average earnings were higher and they exhibited different trends than female lone parents, they are dealt with separately (see *Men heading lone-parent families*).

The reference years for the censuses selected (1980 and 2000) are comparable in terms of the business cycle (unemployment rates of 7.5% and 6.8% respectively). The greater number of new immigrants in the 2001 Census likely affected incomes more than in 1981.<sup>2</sup> To not bias the results, they were excluded from the analysis.<sup>3</sup>

Family type is a derived variable. Respondents are asked the names of all persons usually residing at the address, even those temporarily absent. The first adult on the list becomes Person 1, followed by their spouse, children, and

any other persons in the dwelling. Each person's relationship to Person 1 is indicated. On the basis of this information, a family type is assigned. If children are under joint custody, the parent who has custody for the most time is considered the 'lone parent.' If children spend the same amount of time with each parent, the one with whom they are staying at the time of collection will be the lone parent.

The low-income rate refers to the proportion of families with income below the 'low-income cut-off.' Thresholds are determined by first estimating the average percentage of income allocated to the basic necessities of food, clothing, and shelter (using the Survey of Household Spending). An average is determined for families of different sizes and degrees of urbanization. A family spending 20% more than the average (55%) on basic necessities is deemed to be in 'strained circumstances.' These low-income cut-offs are set for different-sized families with different degrees of urbanization. Since 1992, cut-offs have been updated yearly by changes in the consumer price index.

level. In 2000, 75% of those without a high school diploma were in low income; the proportion fell to 62% for those with a high school diploma, and to 54% for those with non-university postsecondary education. For university graduates, the rate was 31%.

In general, the low-income rate for lone mothers in other age groups has declined since 1980, except for those who did not complete high school. The rate for these women aged 35 to 44 and 45 to 54 reached 60% and 52% respectively in 2000.

The low-income indicator includes all sources of income. Low-income families depend more on government transfers, which did not increase sufficiently to compensate for their lower earnings (Picot, Morissette and Myles 2003). This probably partly explains the rise in low-income rates among lone mothers with little education.

In contrast, low-income situations were much less frequent among mothers in couple relationships. However, rates for those with less education, which were already high, increased.

### **Full-time work: better protection than 20 years ago?**

Up to now, the focus has been on lone mothers without regard to their participation in the labour market. Clearly, holding a full-time job for the full year should

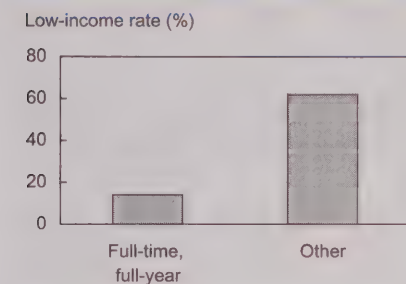
lessen low-income situations. But does it offer better protection than 20 years ago?

In 2000, 40% of lone mothers worked mainly full time (that is, at least 30 hours per week) for at least 48 weeks. This proportion was up from 1980, when it stood at 32%.

When lone mothers working full time for the full year are compared with those not in the labour market or those with a different work pattern, it is not surprising to find that the former find themselves in low income much less often. In 2000, 14% of lone mothers working full time for the full year had a low income, compared with 62% of those with a different work pattern or not in the labour market (Chart E). Generally speaking, without taking into account age, education, occupation, industry or other characteristics, full-time work for the full year seems to mitigate against low income. However, it appears to do so less than 20 years earlier, especially for the youngest women with less education. Among them, the proportion with a low income went from 23% to 37%. Similarly, for those with the least education in the older groups, the rate rose 7 percentage points, reaching 26% for those 35 to 44 and 20% for those 45 to 54 (Table 4).

It is important to distinguish between low earnings and low income. Persons are considered working poor if they make a substantial work effort (such as

**Chart E Having a full-time, full-year job reduces the chances of low income for lone mothers.**



Source: Census of Population, 1981 and 2001

working full time for the full year) but are low-paid. In fact, relatively few low-paid workers are in low income,<sup>8</sup> since the earnings of other household members prevent it. Low income depends more on family circumstances than on an individual's employment situation (Fleury and Fortin 2004). Lone mothers with children 18 and under, even if they work full time throughout the year, have little chance of making ends meet without the contribution of a supplementary income. For this reason, a larger proportion of them compared with mothers with spouses were in low income (43% versus 8%), even when they worked full time throughout the year (14% versus 3%).

Full-time work is not a panacea, especially in the case of the youngest and least educated. For them, earnings from employment may turn out to be inadequate after taking into account employment-related expenses (such as childcare, transportation, extra expenditures on clothing and meals) and the loss of certain government benefits. This probably explains in part the youngest mothers' low level of participation in the labour market and the few changes that have occurred since 1981.

**Table 4 Earnings and low-income rates for lone mothers working full time, full year**

	Earnings			Low-income rate	
	1980	2000	Change	1980	2000
	2000\$		%	%	
<b>Total</b>	<b>31,200</b>	<b>34,100</b>	<b>9.4**</b>	<b>14.1</b>	<b>14.0</b>
<b>Education</b>					
Less than high school diploma	25,200	24,700	-2.1*	18.1	27.0
High school diploma	29,100	29,600	1.7*	16.3	14.5
Postsecondary, completed or not	32,100	33,100	2.8**	12.9	13.0
Bachelor's or higher	50,300	52,000	3.4*	4.6	4.7
<b>25 to 34</b>	<b>29,500</b>	<b>26,800</b>	<b>-9.0**</b>	<b>17.7</b>	<b>22.7</b>
Less than high school diploma	24,700	21,100	-14.7**	22.7	36.6
High school diploma	27,900	24,100	-13.7**	20.2	26.1
Postsecondary, completed or not	30,400	27,100	-10.9**	16.4	20.9
Bachelor's or higher	44,000	39,100	-11.0**	7.4	5.4
<b>35 to 44</b>	<b>32,600</b>	<b>34,400</b>	<b>5.5**</b>	<b>13.8</b>	<b>13.3</b>
Less than high school diploma	26,000	25,200	-3.1**	18.4	25.5
High school diploma	30,200	29,800	-1.4	16.9	14.2
Postsecondary, completed or not	33,100	33,900	2.3**	12.3	11.7
Bachelor's or higher	52,200	52,900	1.4	4.4	5.3
<b>45 to 54</b>	<b>31,000</b>	<b>39,700</b>	<b>28.1**</b>	<b>9.5</b>	<b>8.2</b>
Less than high school diploma	24,600	27,500	11.9**	13.3	19.8
High school diploma	29,700	33,200	11.7**	6.8	7.2
Postsecondary, completed or not	33,000	37,400	13.4**	7.3	8.0
Bachelor's or higher	54,400	55,200	1.6	1.4	3.7

\* Significant at the 10% level.

\*\* Significant at the 5% level.

Source: Census of Population, 1981 and 2001



## Men heading lone-parent families

### A growing number

The increase in lone-parent families has meant an increase not only in lone mothers, but also lone fathers. The latter have almost doubled since 1981, from just over 62,000 to nearly 119,000. In comparison, the number of fathers with spouses held steady at around 2.7 million. Despite this substantial increase, the proportion of male lone-parent families grew only slightly, from 17.4% to 18.6%.<sup>9</sup> However, the phenomenon cannot be described as marginal since they account for approximately one lone-parent family in six (Table 5).

The average age of lone fathers increased only slightly in 20 years (from 41.6 to 41.8), while the age of fathers in couple relationships increased by two years (from 38.3 to 40.4).<sup>10</sup> As a result, the gap between the two groups narrowed. Lone fathers had fewer children (1.5 compared with 1.9), down slightly from 1981. Lone fathers often had only one child, and large families were less common for both groups.

Lone fathers, like lone mothers, have advanced considerably in their educational attainment since 1981. However, compared with fathers in couple relationships, slightly fewer held a university degree and slightly more had not completed high school. Also, on this score, the youngest lone fathers were somewhat behind lone fathers in the older age groups.

### A deterioration in employment earnings

Overall, lone fathers saw their average earnings decline 7.3% in real terms since 1980, going from

**Table 5 Profile of lone fathers and those in couples**

	Lone fathers		Couple fathers	
	1981	2001	1981	2001
<b>Total</b>	<b>62</b>	<b>119</b>	<b>2,719</b>	<b>2,755</b>
<b>Education</b>				
			%	
Less than high school diploma	41.1	26.4	36.3	19.4
High school diploma	6.7	14.0	6.6	13.9
Postsecondary, completed or not	45.6	46.9	50.2	46.8
Bachelor's or higher	6.6	12.6	6.9	19.9
<b>25 to 34</b>	<b>18.9</b>	<b>14.1</b>	<b>36.3</b>	<b>20.8</b>
Less than high school diploma	28.9	29.5	29.4	20.3
High school diploma	5.5	14.4	5.6	14.4
Postsecondary, completed or not	60.8	50.1	59.1	50.6
Bachelor's or higher	4.9	5.9	5.9	14.7
<b>35 to 44</b>	<b>42.7</b>	<b>50.1</b>	<b>39.1</b>	<b>49.5</b>
Less than high school diploma	39.3	27.8	35.6	19.5
High school diploma	6.5	14.1	6.8	14.2
Postsecondary, completed or not	46.2	48.2	49.1	47.7
Bachelor's or higher	8.0	9.8	8.5	18.7
<b>45 to 54</b>	<b>38.4</b>	<b>35.8</b>	<b>24.5</b>	<b>29.6</b>
Less than high school diploma	49.1	23.2	47.5	18.7
High school diploma	7.5	13.7	7.9	13.1
Postsecondary, completed or not	37.6	43.8	39.0	42.7
Bachelor's or higher	5.8	19.2	5.7	25.5
<b>Average age</b>	<b>41.6</b>	<b>41.8</b>	<b>38.3</b>	<b>40.4</b>
<b>Children under 19</b>				
One	52.7	61.3	31.9	35.3
Two	31.2	30.0	43.5	44.7
Three	10.5	6.9	17.9	15.3
Four and more	5.5	1.8	6.8	4.7
Average number of children	1.7	1.5	2.0	1.9
<b>Labour market activity</b>				
Employed	87.2	82.0	93.1	90.8
Unemployed	5.4	7.6	3.2	4.2
Not in the labour force	7.4	10.4	3.7	5.0
<b>Work arrangements</b>				
Mostly full-time	88.6	83.6	94.4	92.6
Mostly part-time	4.8	5.7	2.9	3.2
Did not work	6.6	10.7	2.6	4.2
Mostly full-time, full-year	62.7	59.0	70.3	71.5

Source: Census of Population, 1981 and 2001

\$41,000 to \$38,000 (Table 6).<sup>11</sup> This contrasts with lone mothers, who registered a significant (but not uniform) increase in earnings. However, the decrease was larger for younger and less educated lone fathers—similar to the situation of young lone mothers. Lone fathers aged 25 to 34 posted declines ranging between 28% and 13%. Various other subgroups also posted substantial decreases. For their part, fathers in couples saw

**Table 6 Earnings of lone fathers and those in couples**

	Lone fathers			Couple fathers		
	1980	2000	Change	1980	2000	Change
	2000\$		%	2000\$		%
<b>Total</b>	<b>41,000</b>	<b>38,000</b>	<b>-7.3**</b>	<b>45,900</b>	<b>48,400</b>	<b>5.4</b>
<b>Education</b>						
Less than high school diploma	32,700	26,300	-19.7**	36,800	31,400	-14.6
High school diploma	39,300	34,300	-12.9**	43,800	39,400	-10.1
Postsecondary, completed or not	42,500	37,900	-10.7**	46,100	45,300	-1.9
Bachelor's or higher	72,300	67,400	-6.8*	72,100	78,500	8.9
<b>25 to 34</b>	<b>35,800</b>	<b>27,500</b>	<b>-23.0**</b>	<b>41,300</b>	<b>38,400</b>	<b>-7.1</b>
Less than high school diploma	30,100	21,600	-28.2**	34,300	27,000	-21.1**
High school diploma	36,100	26,300	-27.1**	39,200	34,600	-12.0**
Postsecondary, completed or not	36,900	29,400	-20.4**	42,000	38,200	-9.2**
Bachelor's or higher	51,400	44,500	-13.4**	57,300	58,700	2.5**
<b>35 to 44</b>	<b>42,900</b>	<b>37,600</b>	<b>-12.3**</b>	<b>49,000</b>	<b>49,400</b>	<b>0.9</b>
Less than high school diploma	34,400	27,100	-21.2**	38,400	32,600	-15.0**
High school diploma	40,000	36,000	-9.9	46,600	40,100	-13.9**
Postsecondary, completed or not	44,400	38,200	-14.0**	48,700	46,800	-3.9**
Bachelor's or higher	70,000	67,100	-4.2	76,300	81,100	6.3**
<b>45 to 54</b>	<b>41,500</b>	<b>42,700</b>	<b>3.0</b>	<b>47,700</b>	<b>53,500</b>	<b>12.3</b>
Less than high school diploma	31,900	27,100	-15.2**	37,100	32,700	-11.9**
High school diploma	41,400	35,000	-15.3**	49,900	41,700	-16.3**
Postsecondary, completed or not	43,600	41,300	-5.3*	49,600	48,400	-2.4**
Bachelor's or higher	85,200	70,400	-17.5**	89,400	83,400	-6.7**

\* Significant at the 10% level.

\*\* Significant at the 5% level.

Source: Census of Population, 1981 and 2001

earnings rise by a modest 5%; however, the youngest and least educated among them registered sizeable decreases.

These results are consistent with other studies showing that the employment earnings of low-educated young men have fallen since 1980 (Morissette, Ostrovsky and Picot 2004; Morissette and Johnson 2004; Beaudry and Green 2000; Burbidge, Magee and Robb 2002). This drop is attributable to various factors, including young men's loss of educational advantage owing to the increased educational attainment of older cohorts and women in general. Also, the wages of new entrants to the labour market are lower than in the past (Morissette 2002). One can also point to other factors, such as the rise in the number of temporary jobs (Galarneau 2005; Schellenberg and Clark 1996) and the decrease in the unionization rate among young men (Morissette, Schellenberg and Johnson 2005). The greater declines registered by lone fathers are probably related to the

decrease in their participation rate and their greater tendency to work part time. Also, a major factor distinguishing lone fathers from other fathers is their weaker attachment to the labour market.

#### **More low-income fathers in 2000**

In 2000, low-income situations were half as common for lone fathers as for lone mothers (20% and 43% respectively). However, the low-income rate for lone fathers was up from 16% in 1980, probably in part because of their weaker attachment to the labour market (Table 7). This increase was observed for all age groups and education levels, but the situation deteriorated most for the young and the least educated. In 1980, these groups already posted rates that stood out from the others. In 2000, the low-income rate of those without a high school diploma was close to 30%. Among fathers in couple relationships, the percentage remained below 10% throughout this 20-year period, except for the least educated.



**Table 7 Low-income rates for lone fathers and those in couples**

	Lone fathers		Couple fathers	
	1980	2000	1980	2000
<b>Total</b>	<b>15.9</b>	<b>20.0</b>	<b>9.5</b>	<b>8.3</b>
<b>Education</b>				
Less than high school diploma	21.3	29.2	13.5	16.2
High school diploma	13.4	20.5	8.4	9.0
Postsecondary, completed or not	12.7	17.6	7.6	6.8
Bachelor's or higher	6.5	9.1	3.6	3.6
<b>25 to 34</b>	<b>18.6</b>	<b>27.7</b>	<b>11.0</b>	<b>11.3</b>
Less than high school diploma	26.0	34.9	16.0	21.0
High school diploma	9.5	30.2	10.5	12.2
Postsecondary, completed or not	16.4	24.4	9.2	9.1
Bachelor's or higher	12.2	13.4	5.3	4.4
<b>35 to 44</b>	<b>14.7</b>	<b>19.9</b>	<b>9.0</b>	<b>8.0</b>
Less than high school diploma	20.0	28.3	13.5	15.5
High school diploma	13.3	19.9	8.3	8.5
Postsecondary, completed or not	11.9	17.2	6.9	6.5
Bachelor's or higher	5.5	9.4	3.1	3.4
<b>45 to 54</b>	<b>15.9</b>	<b>17.1</b>	<b>8.0</b>	<b>6.8</b>
Less than high school diploma	21.1	27.9	11.3	13.7
High school diploma	14.8	17.2	6.2	7.6
Postsecondary, completed or not	11.0	15.1	5.2	5.6
Bachelor's or higher	5.5	8.3	2.4	3.5

Source: Census of Population, 1981 and 2001

Having full-time work for the full year appears to reduce the risk of being in low income. In 2000, 59% of lone fathers worked full time for at least 48 weeks, a slightly lower proportion than in 1980 when it was 63%. A larger proportion of fathers in couples worked full time throughout the year, the proportion rising marginally from 70% in 1980 to 71% in 2000.

For lone fathers working full time for the full year, the low-income rate was just under 7%, compared with 38% for lone fathers with a different pattern or not working. In fact, the rate for lone fathers was similar to that for fathers with spouses (4%). However, the mitigating effect appears a little less than in 1980, since low-income rates among lone fathers working full time for the full year rose slightly (from 6% to 7%). On average, the rate declined with age and education (Table 8).

## Summary

Lone mothers are one of the main groups at risk of low income. Among others sharing this unfortunate distinction are those with low education, new immigrants, and unattached individuals (Morissette and Picot 2005). Low income depends more on family circumstances than on an individual's employment situation. Thus, when considering lone-parent families, the proportion with low incomes is a major concern.

The characteristics of lone parents have changed greatly as have Canadians as a whole. In 2001, lone parents were older on average than in 1981, had slightly fewer children, and were much more educated.

These changes gave rise to a sizeable increase in the number of lone mothers employed as well as the proportion working full time. As a consequence, their average employment income rose 35% in real terms compared with their counterparts the same age in 1981. The growth in earnings was reflected in the low-income rate, which, overall, declined by 9 percentage points (from 52% to 43%).

However, these improvements did not extend to lone mothers aged 25 to 34 who had not finished high school—and more than one-quarter of young lone mothers fell into this category. These women saw their average earnings decline and their low-income rate rise substantially. In 2000, at least two-thirds of them were in low income. Low-educated women in other age groups posted a small increase in their earnings, but their low-income rate was little changed and reached more than 50% in 2000.

High rates of low income among the youngest may be related to loss of an educational advantage in relation to their seniors, their weaker attachment to the labour force, and being in occupations requiring few skills. Young lone mothers had their first child earlier in life than mothers in couple relationships. Most of them also raised their child without the support of a spouse. This probably was decisive in their ability to continue their education, which in turn may have had ramifications for their subsequent participation in the labour market.

**Table 8 Low-income rates for lone fathers and couple fathers working full time, full year**

	Lone fathers		Couple fathers	
	1980	2000	1980	2000
<b>Total</b>	<b>5.7</b>	<b>6.8</b>	<b>5.0</b>	<b>4.0</b>
	%			
<b>Education</b>				
Less than high school diploma	7.9	9.7	7.0	7.7
High school diploma	5.0	9.3	4.4	4.9
Postsecondary, completed or not	4.6	6.0	4.2	3.5
Bachelor's or higher	2.7	3.0	1.9	1.8
<b>25 to 34</b>	<b>6.7</b>	<b>10.5</b>	<b>5.7</b>	<b>5.3</b>
Less than high school diploma	11.3	12.1	7.9	10.0
High school diploma	4.1	13.0	5.7	6.4
Postsecondary, completed or not	5.8	10.1	5.1	4.6
Bachelor's or higher	0.9	4.6	2.5	1.8
<b>35 to 44</b>	<b>5.5</b>	<b>6.6</b>	<b>5.0</b>	<b>4.0</b>
Less than high school diploma	7.7	9.4	7.5	7.6
High school diploma	5.4	8.7	4.5	4.9
Postsecondary, completed or not	4.6	5.7	4.1	3.5
Bachelor's or higher	2.8	3.0	1.8	1.8
<b>45 to 54</b>	<b>5.4</b>	<b>5.8</b>	<b>3.9</b>	<b>3.2</b>
Less than high school diploma	7.3	9.1	5.7	6.4
High school diploma	5.1	8.9	2.9	3.8
Postsecondary, completed or not	3.9	5.0	2.7	2.8
Bachelor's or higher	3.3	2.8	1.3	1.8

Source: Census of Population, 1981 and 2001

and their income from employment. These factors may also have affected older lone mothers with little education. These low-educated women have small hope of earning very much after job-related expenses are taken into account, especially in a knowledge-based economy, which more and more requires specific skills and highly qualified workers. This probably explains in part their low employment rate and the little improvement registered since 1980.

Full-time work lessens the chances of being in low income. In 2000, 14% of lone mothers working full time throughout the year were in low income, compared with 62% of those with a different work pattern or not in the labour market. However, full-time work offers less protection than in 1980, especially for the youngest with little education and for the less-educated in general.

For lone fathers, the increase in educational attainment did not have the same implications as for lone mothers. In 1981, these men were for the most part already participating in the labour market, whereas in 2001, a smaller proportion were employed or employed full time. Their earnings generally fell, particularly for the youngest and least educated, where the drop was close to 30%. The low-income rate therefore rose, going from 16% to 20% for lone fathers in general. All age groups and education

levels showed an increase. In 2000, low-income rates were highest for the young with little education (35%) and for the low-educated in general (29%).

Lastly, full-time work for the full year reduces lone fathers' risk of being in low income. Only 7% of those who had this work pattern were in low income, compared with 38% of those with another work pattern or not working. Nevertheless, the mitigating effect seems to have diminished since 1980.

### Perspectives

#### Notes

1 The census reference year for income and work arrangements is the year preceding the collection year.

2 A new immigrant is usually defined as a person born abroad who arrived in Canada during the five years preceding the census year. For example, for the 2001 Census, a new immigrant would have arrived in Canada between 1996 and 2001.

3 In addition to the problems that new immigrants often face—non-recognition of their credentials, education level or experience abroad (Green and Worswick 2002; Ferrer and Riddell 2003), poorer quality education (Sweetman 2003), linguistic disadvantage, weak social network, and lack of information about the job market—new immigrants at the head of lone-parent families also have more dependent children 18 and under. This can make their participation in the labour market even more difficult. They in fact warrant a separate study and have therefore been excluded from the analysis.

4 The census does not give information on a mother's age at the birth of her first child. However, 30% of young lone mothers had a preschool-aged child at home compared with



50% of young mothers in a couple relationship. Among older mothers, the proportion with a preschool-aged child was also less for lone mothers. This would indicate that lone mothers had their child earlier in life.

5 In 1981, the majority of young lone mothers were separated or divorced (72%). In 2001, the proportion was 37%, with nearly two-thirds being single, having never married or lived in a common-law relationship. These lone mothers are more likely than those in 1981 to find themselves truly alone, leaving them with even less chance of pursuing their education.

6 Throughout this article, the different income indicators are expressed in 2000 dollars to account for inflation.

7 These averages include nil and negative earnings.

8 According to Chung (2004), "Of the 1.7 million workers receiving low weekly earnings, 30% lived in families with low income in 2000—unchanged from 1980."

9 These percentages apply to the population aged 15 and over. For the population covered by this article (the population aged 25 to 54 with children aged 18 and under, excluding new immigrants), the proportion of male lone-parent families went from 15.9% to 17.6% during the same period.

10 The general tendency to postpone forming a couple and having a first child is also contributing to the aging of lone fathers and fathers with spouses.

11 These averages include nil and negative employment earnings.

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# Shifts in spending patterns of older Canadians

Raj K. Chawla

**A**s households age, their economic and demographic situations change. Income, savings and wealth generally decline, and household size shrinks as adult children leave or a spouse dies. Spending patterns may also change. For example, older families may spend less on transportation as they experience reduced mobility, and more on health.

The economic well-being of older households with respect to pre- and post-tax income, low-income rates, and wealth holdings has been widely discussed (Myles 2000; Gower 1998; Chawla and Pold 2003; Williams 2003). However, less is known about how their income is divided among taxes, security,<sup>1</sup> consumption and savings. This article looks at three household groups based on the age of the reference person: 55 to 64, 65 to 74, and 75 or over (see *Data sources and definitions*). Since more than three-quarters of the first group had employment earnings compared with around one-third of the second group and just one-tenth of the third, the shifts in expenditure patterns should also reflect the adjustments households make as their active attachment with the labour market diminishes.<sup>2</sup>

Household expenditure depends on factors such as income, size, composition, and urban or rural location, so any comparisons over time would at least require adjustments with respect to type and size of household. A common approach is to use per capita or equivalence scale concepts (Pendakur 1998). Since the study focuses on households at a life-cycle stage when the majority are either couples with no children or unattached individuals, it should not be affected by such concerns. In 1982, unattached men and women and couples accounted for 57% of all households in the 55-to-64 group compared with 86% in the 75-and-over group; by 2003, their proportions were 61% and 85% respectively.

Expenditure patterns change not only over the life cycle but also over time as new products and services emerge. Changes in spending patterns between 1982 and 2003 are highlighted using 'similar' rather than 'cohort' households. For example, an increase of \$100 in mean expenditure on a given item by unattached men implies that they were, as a group, spending that much more in 2003 than similar men in 1982. (All money figures are in 2003 dollars.)

## Socio-demographic transitions as households age

The composition of households changes notably as they age. In both 1982 and 2003, a little over one-third of households in the 55-to-64 group still contained children or other relatives, with the remainder being unattached individuals or couples (Table 1). By 65 to 74, however, households consisted largely of couples and unattached women; and by 75 plus, unattached women predominated, at a little over 40% of households. Such compositional shifts result in smaller households, causing some to downsize or move to rental accommodation. For instance, between the 55-to-64 and 75-plus age groups, the proportion renting increased from 28% to 43% in 1982 and from 24% to 36% in 2003.

Another change at this time concerns major source and amount of income. In both 1982 and 2003, three-quarters of households in the 55-to-64 group had employment earnings, accounting for more than 70% of their income. For those in the 75-plus group, on the other hand, government transfers and pensions (private and work-related) became more prevalent—constituting 59% of income in 1982 and 80% in 2003. Although a greater proportion of households in the 75-plus group reported earnings in 2003 than in 1982, the share of income from earnings fell from 12% to 9%. The share of income from investments also fell for this group—from 29% in 1982 to 10% in 2003.<sup>3</sup>

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**Table 1 Profile of older households by age of reference person**

	1982				2003			
	Total	55-64	65-74	75+	Total	55-64	65-74	75+
<b>Households</b>	<b>2,669</b>	<b>1,203</b>	<b>939</b>	<b>527</b>	<b>4,233</b>	<b>1,881</b>	<b>1,221</b>	<b>1,131</b>
				'000 %				
<b>Household type</b>								
Unattached men	7.9	6.6	6.8	12.9	10.6	9.3	9.5	14.1
Unattached women	26.2	16.4	29.3	42.9	24.7	14.3	25.0	41.6
Couples only	36.1	33.6	42.9	29.9	36.8	37.2	43.4	29.0
Households with children or relatives	24.5	38.5	15.0	9.1	22.9	35.1	16.8	9.0
Other mixed households	5.3	4.9	6.0	5.2	5.0	4.1	5.3	6.3
<b>Homeownership</b>								
Renter	32.1	27.6	31.7	43.3	27.1	24.2	24.0	35.5
Owner without mortgage	54.4	49.9	60.1	54.6	57.1	49.3	65.4	61.3
Owner with mortgage	13.4	22.5	8.2	2.1	15.7	26.5	10.6	3.2
<b>Income sources</b>								
Earnings	48.8	80.3	29.5	11.3	46.4	76.0	32.4	12.2
Investment income	69.8	66.9	73.2	70.6	35.0	29.1	38.2	41.4
Government transfers	85.4	68.4	99.1	99.9	87.7	73.1	99.4	99.5
Other sources	34.9	26.0	44.1	38.8	47.5	35.5	60.3	53.5
<b>Composition of income</b>								
Earnings	51.0	72.9	22.4	12.4	50.3	71.7	27.7	9.2
Investment income	16.1	10.7	21.8	28.8	5.7	4.1	6.7	10.2
Government transfers	24.0	10.4	42.5	46.3	25.6	10.4	40.8	55.6
Other sources	8.9	6.0	13.3	12.5	18.5	13.8	25.0	24.9
<b>Income from government transfers</b>								
None	14.6	31.6	0.9	0.1	12.3	26.9	0.6	0.5
Some	73.2	60.5	84.8	81.6	69.8	63.8	80.5	68.2
Complete	12.2	7.9	14.3	18.3	17.9	9.3	18.9	31.3
<b>Income level</b>								
Under \$20,000	31.4	18.1	35.8	53.9	23.7	14.9	23.0	39.1
\$20,000 - \$34,999	25.8	18.3	34.6	27.4	26.6	17.9	32.3	35.0
\$35,000 - \$49,999	15.2	18.0	14.5	10.1	16.2	16.4	19.4	12.5
\$50,000 or more	27.5	45.6	15.0	8.7	33.5	50.8	25.4	13.4
<b>Expenditure level</b>								
Under \$20,000	35.8	18.5	41.9	64.7	24.0	12.8	24.3	42.3
\$20,000 - \$34,999	26.4	21.3	33.9	24.4	26.2	17.9	31.2	34.7
\$35,000 - \$49,999	16.3	24.0	12.5	5.7	16.9	17.5	21.1	11.3
\$50,000 or more	21.4	36.3	11.6	5.2	33.0	51.9	23.4	11.8
<b>Expenditure to income ratio</b>								
Under 75.0	21.3	18.9	22.2	24.9	12.9	10.6	13.6	16.0
75.0 - 94.9	36.0	38.0	33.6	35.6	34.4	34.2	32.9	36.3
95.0 - 99.9	10.0	10.4	9.6	9.9	10.1	10.3	10.0	10.0
100.1 - 104.9	8.6	8.0	10.1	7.5	6.1	5.6	6.9	6.1
105.0 - 124.9	13.9	14.6	12.8	14.1	18.3	19.6	18.1	16.2
125.0 or more	10.2	10.0	11.7	7.9	16.4	17.9	16.7	13.6

Sources: Family Expenditure Survey, 1982; Survey of Household Spending, 2003

A change in the principal component of income is accompanied by a shift in the income distribution of households as they age. In both 1982 and 2003, the majority of households in the 55-to-64 group, with earnings as the major source of income, had incomes of \$50,000 or more, whereas the majority in the 75-plus group, with pensions and transfers, received under \$20,000.

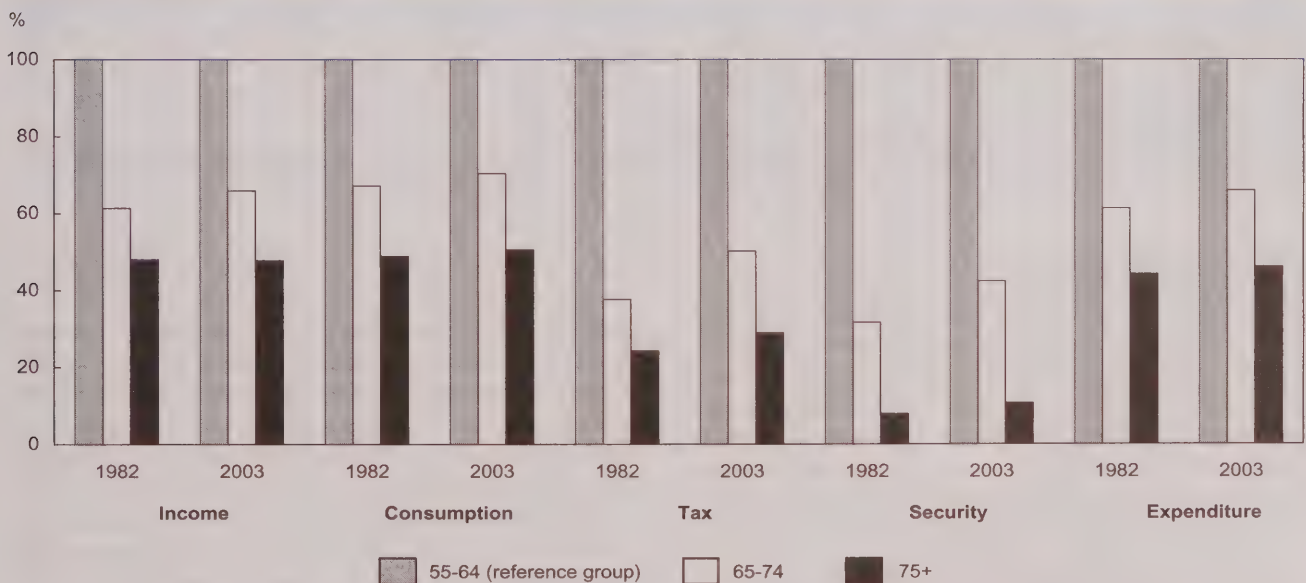
### Income, consumption and expenditure changes

As households age, their income drops (Chart). The largest decline occurs between the 55-to-64 and 65-to-74 groups, as labour market attachment diminishes and earnings are no longer the major source of income. A further drop occurs between the 65-to-74 and 75-plus groups, largely because of little or no earnings and more reliance on government transfers and pensions. Compared with a mean income of \$53,100 for households 55 to 64 in 1982, those 65 to 74 received 39% less and those 75 plus, 52% less (Table 2). By 2003, even though the mean income of households in the first group had grown to \$62,800, the pattern remained the same, with income falling by

34% and 52% for those in the older groups. In both years, the mean income of households 55 or older with no earnings was about half that of those with an employed member.

As household income declines, so does expenditure. The expenditure drop reflects primarily the drop in income tax and security contributions. Under a progressive taxation system, the effective tax rate drops as income decreases. Security contributions will also be less as people retire from paid employment. However, income and expenditure do not drop equally over the three age groups. Income drops much more significantly between the 55-to-64 and 65-to-74 groups, largely because of the loss of earnings, whereas expenditure drops more gradually because households take a little longer to adjust their spending. Among couples, for example, of the total drop in income over the three age groups in 2003, 68% occurred between the two younger groups (55 to 64 and 65 to 74) with 32% between the two older ones (65 to 74 and 75 plus); the corresponding drops in expenditure were 64% and 36%, with 58% and 42% for personal consumption.

**Chart** The largest drops in income, consumption and expenditure are seen between the first two age groups.



Sources: Family Expenditure Survey, 1982; Survey of Household Spending, 2003



**Table 2 Income disbursement by age of reference person**

	1982				2003			
	Total	55-64	65-74	75+	Total	55-64	65-74	75+
<b>All households</b>					2003\$			
<b>Mean income</b>	<b>40,500</b>	<b>53,100</b>	<b>32,600</b>	<b>25,600</b>	<b>47,900</b>	<b>62,800</b>	<b>41,400</b>	<b>30,100</b>
<b>Disbursement</b>					%			
Personal consumption	66.3	64.4	70.5	65.4	71.1	69.2	73.9	73.3
Income tax	13.5	16.3	10.0	8.2	17.6	20.2	15.3	12.2
Security	3.1	4.0	2.1	0.7	4.2	5.4	3.5	1.2
Gifts and contributions	4.4	3.5	5.5	6.7	3.6	2.3	4.3	7.0
Savings <sup>1</sup>	12.7	11.8	12.0	19.1	3.5	2.9	3.0	6.3
<b>Unattached men</b>					2003\$			
<b>Mean income</b>	<b>27,100</b>	<b>34,700</b>	<b>24,100</b>	<b>20,900</b>	<b>29,300</b>	<b>32,700</b>	<b>27,100</b>	<b>27,200</b>
<b>Disbursement</b>					%			
Personal consumption	63.5	57.8	74.9	62.2	72.9	70.5	76.2	73.7
Income tax	13.5	18.1	9.5	8.9	18.2	21.6	14.9	16.1
Security	2.6	3.8	2.6	0.3	2.2	3.3	1.6	1.2
Gifts and contributions	4.9	4.5	5.3	5.4	6.2	5.8	5.6	7.1
Savings <sup>1</sup>	15.4	15.7	7.7	23.2	0.5	-1.2	1.7	1.9
<b>Unattached women</b>					2003\$			
<b>Mean income</b>	<b>19,400</b>	<b>22,500</b>	<b>19,200</b>	<b>16,900</b>	<b>23,600</b>	<b>28,500</b>	<b>22,800</b>	<b>21,200</b>
<b>Disbursement</b>					%			
Personal consumption	75.3	76.4	74.4	75.1	81.0	82.1	84.1	78.0
Income tax	8.4	12.6	7.3	5.2	12.8	16.5	12.3	10.3
Security	1.3	3.1	0.6	0.1	1.9	4.4	1.0	0.5
Gifts and contributions	7.1	4.2	8.5	8.4	6.8	2.4	7.0	10.0
Savings <sup>1</sup>	8.0	3.7	9.2	11.2	-2.4	-5.4	-4.4	1.2
<b>Couples only</b>					2003\$			
<b>Mean income</b>	<b>43,700</b>	<b>54,700</b>	<b>36,700</b>	<b>33,800</b>	<b>52,900</b>	<b>66,200</b>	<b>45,800</b>	<b>36,300</b>
<b>Disbursement</b>					%			
Personal consumption	62.9	59.3	68.9	61.6	69.7	67.1	73.7	71.5
Income tax	13.5	16.7	10.2	9.2	18.5	21.7	16.0	11.2
Security	3.0	4.0	2.6	0.3	3.7	5.0	2.7	1.0
Gifts and contributions	4.9	4.0	5.4	7.0	3.5	2.9	3.4	6.1
Savings <sup>1</sup>	15.7	16.1	12.8	21.9	4.6	3.4	4.2	10.3

<sup>1</sup> Income less expenditure.

Sources: Family Expenditure Survey, 1982; Survey of Household Spending, 2003

## Spending changes by age

Since income is a key determinant of expenditure, a drop in income may adversely affect standard of living. Households may spend more than their income, running down savings or incurring debt in order to maintain their lifestyle. In fact, about one-third of households 55 and over spent more than their income in 1982, and almost 41% in 2003. One-sixth of households in the 55-to-64 and 75-plus groups were on the border line, with expenditure within 5% of income. The majority of those who outspent their income did so by 5% to 25%.

All households spent most of their income dollar on personal consumption—anywhere between 58 cents and 84 cents, depending on age and type of household. The remainder went for income tax, security contributions, gifts and contributions,<sup>4</sup> or savings. (The shares spent on these items also varied by age and type of household.) In 1982, households in the 55-to-64 group, with earnings as the major source of their relatively higher incomes, used 64 cents for personal consumption, 16 cents for income tax, and 4 cents each for security and gifts and contributions, saving the remaining 12 cents; by 2003, such households were spending more on consumption (69 cents), income tax

(20 cents), security and gifts and contributions (8 cents), and saving very little (3 cents). The situation was no different for non-working households in the 75-plus group. They spent 65 cents of each income dollar on personal consumption and another 8 cents on income tax in 1982, compared with 73 cents and 12 cents in 2003. Consequently, these households also saved much less of their income dollar in 2003 than in 1982—6 cents versus 19.

In both 1982 and 2003, unattached women in the 55-to-64 and 75-plus groups spent most of their income dollar on personal consumption (food, shelter, household operations, clothing, and the like)—much more than their male and couple counterparts. Since these women's incomes were low, they of course paid less in income tax and security contributions. Nonetheless, they spent relatively more of their income dollar on gifts and contributions and saved less. On the other hand, unattached men aged 55 to 64 spent more of their income dollar on gifts and contributions and income tax than couples.

### Consumption changes by age

All types of households spent more of their income dollar on personal consumption in 2003 than in 1982. In 1982, the 55-to-64 group spent \$34,200 compared with \$16,700 for those 75 plus. By 2003, spending had reached \$43,500 and \$22,000 (Table 3A). The widening gap between working and non-working households largely reflected greater expenditures by working households—\$9,300 compared with \$5,300. As always, food, shelter and transportation dominated, accounting for between 61 and 68 cents of each consumption dollar. The ranking of these three items changed for households in the 55-to-64 group—from food, shelter, transportation in 1982 to shelter, transportation, food in 2003. However, the order did not change for those 75 plus: shelter, food, transportation (Table 3B).

The next three components of consumption in 1982 for those 55 to 64 were clothing, recreation, and household operations; in 2003, this group spent relatively more on recreation and much less on clothing. In both years, these three items accounted for another 18 to 19 cents of consumption. For households in the 75-plus group, on the other hand, the next three components of consumption in 1982 were household operations, clothing and household furnishings; by 2003, the last two were replaced by health and recreation. Expenditure on these three components took 17 to

19 cents. Overall, then, in both 1982 and 2003, just six components of consumption accounted for 80% of the total for households in the 55-to-64 group and 84% for those 75 plus.

The amount spent on personal consumption drops as households age. For instance, in 1982, mean consumption by couples in the 55-to-64 group was \$32,400 compared with \$20,800 for those 75 plus, almost 36% less; by 2003, the difference was nearly 42% as expenditures hit \$44,400 and \$25,900 for the respective groups. A similar pattern prevailed for unattached individuals. The picture was much the same in 2003, but with narrower gaps between unattached individuals and couples in the 75-plus group.

Since most women have lower incomes than men, they also consume less. In the 55-to-64 group in 1982, women had 35% less income but only 14% less consumption. But as women's incomes improved over time, their income in 2003 was only 13% less and their consumption matched men's. For unattached individuals 75 plus, on the other hand, both income and consumption ratios by sex dropped—from 81% to 78% for income and from 97% to 83% for consumption.

Despite increases in personal consumption between 1982 and 2003, the spending patterns of couples in the 55-to-64 and 75-plus groups were about the same. In both years, food, shelter and transportation accounted for nearly two-thirds of their total consumption. Both groups spent less on food in 2003 than in 1982, but more on shelter and transportation. More was also spent on recreation and health; for couples 55 to 64, the mean expenditure rose from \$1,500 to \$3,900 (157%) on recreation, and from \$1,000 to \$2,300 (116%) on health; the corresponding increases in the 75-plus group were from \$800 to \$1,000 (25%) and from \$700 to \$2,100 (219%).

The key spending patterns of unattached individuals were similar to couples. Like couples in the 55-to-64 group, unattached men and women allocated a little over 60% of their consumption to food, shelter and transportation. However, in the 75-plus group, women spent more on household operations while men spent much more on transportation. The gap between men and women on health expenditures narrowed in the 75-plus group—men spent a little over half the amount spent by women in 1982 but slightly more in 2003.

Decreases occurred in some areas of spending as households aged. For example, for couples in 1982, substantial decreases were noted for tobacco and



**Table 3A Mean expenditure on components of consumption by age of reference person**

	1982				2003			
	Total	55-64	65-74	75+	Total	55-64	65-74	75+
2003\$								
<b>All households<sup>1</sup></b>								
Food	6,010	7,400	5,280	4,130	5,660	6,750	5,390	4,120
Shelter	6,330	7,170	5,860	5,280	8,690	10,350	7,670	7,040
Household operation	1,530	1,820	1,380	1,140	2,180	2,610	1,960	1,690
Furnishings and equipment	1,170	1,510	1,010	660	1,300	1,730	1,120	760
Clothing	1,920	2,640	1,510	1,030	1,730	2,430	1,480	850
Transportation	4,610	6,390	3,810	1,960	6,780	9,470	6,080	3,050
Health	790	1,030	650	510	1,700	1,860	1,680	1,470
Personal care	640	810	540	410	650	780	630	470
Recreation	1,300	1,800	1,090	550	2,460	3,410	2,210	1,160
Reading and printed material	230	280	210	150	270	310	260	200
Tobacco and alcohol	1,140	1,690	830	430	1,110	1,540	1,010	500
Miscellaneous	990	1,410	760	460	1,060	1,380	950	660
Mean personal consumption <sup>2</sup>	26,810	34,210	22,990	16,730	34,040	43,490	30,610	22,030
Mean expenditure	35,310	46,860	28,710	20,700	46,220	61,000	40,190	28,150
<b>Unattached men</b>								
Food	3,850	4,320	3,820	3,320	3,380	3,360	3,510	3,300
Shelter	4,880	4,940	5,420	4,300	6,750	7,250	5,900	6,800
Household operation	930	1,020	930	820	1,390	1,570	1,160	1,370
Furnishings and equipment	490	860	320	230	740	950	500	660
Clothing	760	1,070	750	400	640	920	610	340
Transportation	2,830	3,080	3,650	1,760	3,890	3,770	4,370	3,680
Health	400	660	280	200	900	750	860	1,090
Personal care	230	300	240	150	230	260	250	190
Recreation	670	850	630	500	1,400	1,630	1,130	1,350
Reading and printed material	170	200	180	110	190	190	180	180
Tobacco and alcohol	1,160	1,640	1,140	610	1,020	1,330	1,230	540
Miscellaneous	840	1,130	700	620	830	1,020	950	530
Mean personal consumption <sup>2</sup>	17,200	20,080	18,050	13,010	21,380	23,070	20,650	20,060
Mean expenditure	22,910	29,260	22,240	16,070	29,180	33,100	26,630	26,690
<b>Unattached women</b>								
Food	3,220	3,320	3,380	2,950	3,170	3,490	3,230	2,950
Shelter	5,180	5,340	5,070	5,190	6,910	7,790	6,770	6,490
Household operation	1,110	1,190	1,070	1,100	1,520	1,620	1,480	1,480
Furnishings and equipment	520	590	550	430	710	960	750	550
Clothing	890	1,080	900	720	880	1,190	970	660
Transportation	1,440	2,640	1,240	630	2,170	3,860	2,260	1,150
Health	410	530	360	360	1,040	1,100	990	1,030
Personal care	390	440	370	360	470	540	480	420
Recreation	560	820	580	300	1,110	1,270	1,120	1,010
Reading and printed material	140	160	150	120	170	210	190	150
Tobacco and alcohol	310	520	270	170	390	720	430	170
Miscellaneous	400	530	360	340	480	570	440	450
Mean personal consumption <sup>2</sup>	14,580	17,170	14,300	12,660	19,080	23,410	19,150	16,560
Mean expenditure	17,830	21,640	17,460	14,960	24,130	30,080	23,770	20,980
<b>Couples only</b>								
Food	6,130	6,930	5,670	5,260	6,150	6,660	6,140	5,090
Shelter	6,550	7,290	6,120	5,760	8,830	10,180	8,010	7,290
Household operation	1,660	1,950	1,510	1,260	2,270	2,600	2,100	1,830
Furnishings and equipment	1,400	1,650	1,250	1,100	1,650	2,090	1,440	1,050
Clothing	1,830	2,200	1,640	1,390	1,890	2,450	1,650	1,060
Transportation	4,970	5,920	4,770	3,020	7,600	9,850	6,640	4,340
Health	860	1,050	750	660	2,160	2,260	2,060	2,100
Personal care	650	750	600	520	700	770	680	570
Recreation	1,290	1,520	1,260	790	2,870	3,910	2,670	990
Reading and printed material	240	280	210	190	290	330	270	240
Tobacco and alcohol	1,120	1,570	910	520	1,170	1,600	930	660
Miscellaneous	790	1,220	540	310	1,150	1,480	1,020	650
Mean personal consumption <sup>2</sup>	27,520	32,380	25,270	20,790	36,870	44,390	33,730	25,910
Mean expenditure	36,880	45,880	31,950	26,390	50,460	63,920	43,820	32,530

<sup>1</sup> Includes those with children or relatives, and other household types.

<sup>2</sup> Includes small expenditure on education, not shown separately.

Sources: Family Expenditure Survey, 1982; Survey of Household Spending, 2003

**Table 3B Allocation of consumption by age of reference person**

	1982					2003			
	Total	55-64	65-74	75+		Total	55-64	65-74	75+
<b>All households<sup>1</sup></b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	%	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Food	22.4	21.6	23.0	24.7		16.6	15.5	17.6	18.7
Shelter	23.6	20.9	25.5	31.6		25.5	23.8	25.1	32.0
Household operation	5.7	5.3	6.0	6.8		6.4	6.0	6.4	7.7
Furnishings and equipment	4.4	4.4	4.4	3.9		3.8	4.0	3.7	3.5
Clothing	7.2	7.7	6.6	6.1		5.1	5.6	4.8	3.9
Transportation	17.2	18.7	16.6	11.7		19.9	21.8	19.9	13.8
Health	3.0	3.0	2.8	3.1		5.0	4.3	5.5	6.7
Personal care	2.4	2.4	2.4	2.5		1.9	1.8	2.0	2.1
Recreation	4.9	5.3	4.8	3.3		7.2	7.9	7.2	5.3
Reading and printed material	0.9	0.8	0.9	0.9		0.8	0.7	0.8	0.9
Tobacco and alcohol	4.2	4.9	3.6	2.6		3.3	3.5	3.3	2.2
Miscellaneous	4.2	4.9	3.5	2.8		4.5	5.2	3.7	3.2
<b>Unattached men</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>		<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Food	22.4	21.5	21.1	25.5		15.8	14.6	17.0	16.5
Shelter	28.4	24.6	30.0	33.0		31.6	31.4	28.6	33.9
Household operation	5.4	5.1	5.2	6.3		6.5	6.8	5.6	6.8
Furnishings and equipment	2.9	4.3	1.8	1.7		3.4	4.1	2.4	3.3
Clothing	4.4	5.3	4.1	3.1		3.0	4.0	2.9	1.7
Transportation	16.4	15.3	20.2	13.5		18.2	16.3	21.1	18.4
Health	2.3	3.3	1.6	1.5		4.2	3.3	4.2	5.4
Personal care	1.4	1.5	1.3	1.2		1.1	1.1	1.2	0.9
Recreation	3.9	4.2	3.5	3.8		6.6	7.1	5.5	6.7
Reading and printed material	1.0	1.0	1.0	0.9		0.9	0.8	0.9	0.9
Tobacco and alcohol	6.7	8.2	6.3	4.7		4.8	5.8	5.9	2.7
Miscellaneous	4.9	5.7	3.9	4.7		4.0	4.6	4.7	2.7
<b>Unattached women</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>		<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Food	22.1	19.4	23.6	23.3		16.6	14.9	16.9	17.8
Shelter	35.6	31.1	35.5	41.0		36.2	33.3	35.4	39.2
Household operation	7.6	7.0	7.5	8.6		8.0	6.9	7.7	8.9
Furnishings and equipment	3.6	3.4	3.9	3.4		3.7	4.1	3.9	3.3
Clothing	6.1	6.3	6.3	5.7		4.6	5.1	5.0	4.0
Transportation	9.9	15.4	8.7	5.0		11.4	16.5	11.8	7.0
Health	2.8	3.1	2.5	2.8		5.4	4.7	5.2	6.2
Personal care	2.7	2.6	2.6	2.9		2.5	2.3	2.5	2.5
Recreation	3.8	4.8	4.1	2.4		5.8	5.4	5.8	6.1
Reading and printed material	1.0	0.9	1.0	0.9		0.9	0.9	1.0	0.9
Tobacco and alcohol	2.1	3.0	1.9	1.3		2.0	3.1	2.3	1.0
Miscellaneous	2.8	3.2	2.5	2.7		2.8	2.8	2.4	3.0
<b>Couples only</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>		<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Food	22.3	21.4	22.4	25.3		16.7	15.0	18.2	19.6
Shelter	23.8	22.5	24.2	27.7		24.0	22.9	23.7	28.1
Household operation	6.0	6.0	6.0	6.1		6.1	5.9	6.2	7.1
Furnishings and equipment	5.1	5.1	5.0	5.3		4.5	4.7	4.3	4.1
Clothing	6.7	6.8	6.5	6.7		5.1	5.5	4.9	4.1
Transportation	18.1	18.3	18.9	14.5		20.6	22.2	19.7	16.8
Health	3.1	3.2	3.0	3.2		5.9	5.1	6.1	8.1
Personal care	2.4	2.3	2.4	2.5		1.9	1.7	2.0	2.2
Recreation	4.7	4.7	5.0	3.8		7.8	8.8	7.9	3.8
Reading and printed material	0.9	0.9	0.8	0.9		0.8	0.7	0.8	0.9
Tobacco and alcohol	4.1	4.8	3.6	2.5		3.2	3.6	2.8	2.5
Miscellaneous	3.0	3.9	2.2	1.5		3.5	3.8	3.4	2.7

<sup>1</sup> Includes those with children or relatives, and other household types.

Sources: Family Expenditure Survey, 1982; Survey of Household Spending, 2003



## Data sources and definitions

The analysis is based on the 1982 **Family Expenditure Survey (FAMEX)** conducted in February-March 1983 and the 2003 **Survey of Household Spending (SHS)** done in January-March 2004. Since the surveys were taken nearly 20 years apart, some changes in spending patterns could be attributed to changes in survey concepts, content, and methods. Both surveys were conducted by personal interview, used a multi-stage stratified clustered sample drawn from the Labour Force Survey frame. The population in institutions such as nursing homes, hospitals and penitentiaries were excluded as well as those living in the territories and on Indian reserves. However, some key differences remain. First, FAMEX, a periodic survey until 1996, asked 641 questions compared with 425 in the SHS, an annual survey since 1997. Also, the methods used to derive population estimates from the respective samples were different, and the SHS used much more automated systems. For more details on these issues, see Statistics Canada (1984, 2000 and 2003).

The surveys collected data on expenditures and income from all private households in the 10 provinces. The household spending unit is defined as a group of persons dependent on a common or pooled income for major expenses and living in the same dwelling, or one financially independent individual living alone. Since the composition of a household may vary over a year, the use of part-year and full-year households would have distorted some of the comparisons. Hence, the analysis is restricted to full-year households and their composition and dwelling characteristics as of December 31 linked to details on expenditures incurred and income received during the calendar years 1982 and 2003. The analysis is based on households with the reference person 55 or older—3,455 for 1982 and 5,935 for 2003.

**Household:** A person or group of persons occupying one dwelling unit. The number of households, therefore, equals the number of occupied dwellings. A full-year household has at least one full-year member; a part-year household is composed entirely of part-year members.

**Head/reference person:** Despite some differences, the two concepts are used here synonymously. The 1982 data are classified by age of the head of household and the 2003 data by age of the reference person. The husband was treated as the head in families consisting of married couples with or without children, as was the parent in lone-parent families and normally the eldest in all other families. On the other hand, the reference person was chosen by the household member as the person mainly responsible for the financial maintenance of the household. Also, this person must have been a member of the household on December 31 of the reference year. The head/reference person can be either male or female.

**Tenure:** Households are classified by tenure (homeownership status) into three groups: renters, homeowners without a mortgage, and homeowners with a mortgage.

**Expenditure on shelter:** Data on this component are not comparable. In 1982, they included mortgage interest on a home and vacation home whereas the principal was included under 'net changes in assets and debts'. In 2003, this component included information on regular mortgage payments (principal and interest).

**Pre-tax household income:** Sum of incomes before taxes and other deductions received during the reference calendar year by all members of the household. Sources include wages and salaries, net income from self-employment, rental and investment income, government transfers (EI benefits, Child Tax Benefits, GST credits, provincial tax credits, social assistance, OAS, GIS, C/QPP benefits), private and employer pension plans, scholarships, alimony, child support payments, and so forth. Income in kind, windfall gains, and capital gains and losses are excluded.

**Expenditures collected:** With some minor exceptions, the surveys include spending on all goods and services received during the reference calendar year. All expenses attributable to an owned business are excluded. On the other hand, taxes such as GST, provincial sales tax, duties, customs and excise on all goods and services purchased are included in expenditures.

**Total expenditure:** Sum of expenditure on current consumption of goods and services, federal and provincial income tax paid, payments pertaining to security, and gifts and contributions made. Contributions to registered retirement savings plans are not treated as a component of security.

**Current consumption (also referred to as total consumer spending):** Includes expenditure on broad components: food, shelter, household operation, household furnishings and equipment, clothing, transportation, health, personal care, recreation, reading material and other printed matter, education, tobacco products and alcoholic beverages, and miscellaneous (including union dues and games of chance). For a detailed breakdown of components, see Statistics Canada (2003).

**Constant dollars:** To remove the effect of inflation or rising prices on consumption, all money figures are in 2003 dollars. While the prices of all 1982 goods and services may not have moved up at the same pace as the all-items CPI, the use of one conversion factor simplifies the analysis. Another advantage of using one such conversion factor is that it preserves the rank order and budget percentage of spending items (Snider 2005).

**Average expenditure by item:** Unless stated otherwise, overall averages are used. The overall average is obtained by dividing the aggregate amount of an item by total households.

alcohol, recreation, transportation, health, and clothing. Shelter and food on the other hand showed the least reduction. By 2003, the components with larger reductions remained the same but those with least reduction now included health, and reading and printed materials.<sup>5</sup> Similarly, for the unattached, relatively smaller reductions were noted for shelter, food, and household operations.

### **Rising health expenditures**

Between 1982 and 2003, household expenditures on health rose because of increased premiums for government and private health insurance, and because of higher out-of-pocket expenses for treatments and medicines not covered by insurance.<sup>6</sup> Households with a reference person 55 and over spent \$7.2 billion in 2003 on health compared with \$2.1 billion in 1982. And in both years, health insurance premiums accounted for 30% of these costs.

Since supplementary medical coverage through a private insurance plan is often a benefit of employment, the proportion of households covered under such schemes declines between the 55-to-64 and 75-plus groups. For instance, for unattached women, it fell from 53% to 47% in 1982 and from 49% to 42% in 2003. Thus, not only are more households in the 75-plus group incurring more out-of-pocket health expenses, but also these direct costs constitute the lion's share of their health expenditure—for unattached women, the percentage grew from 78% in 1982 to 81% in 2003 while jumping from 64% to 75% for men (Table 4).

Besides health insurance, all households, irrespective of age, spent the most on prescribed drugs, and other medical equipment and appliances. After these two, the order of spending on dental services, eye care, and other health care and medical services varied across age groups—more in 1982 than in 2003. However, couples and unattached individuals in the 75-plus group in 2003 showed a consistent order of out-of-pocket spending on health: prescribed drugs, other medical and health care services, dental services, and eye care.

### **Spending patterns of households dependent on government transfers**

For households in the 55-to-64 group, government transfers may include Employment Insurance benefits, worker's compensation, C/QPP disability benefits, or social assistance; for households 65 to 74 and 75 plus,

such payments may also include Old Age Security, Guaranteed Income Supplement, the Allowance, veterans' pensions, or the C/QPP retirement pension. Households in the latter two age groups are more likely to derive all their income from government transfers—especially those with no work-related pension, investments, or other source of income.

In 2003, almost one-third of households in the oldest group received their entire income from government transfers compared with less than one-fifth in 1982; the corresponding proportions for the 55-to-64 group were 9% and 8%. In both years, two-thirds of these households were unattached individuals (more women than men) and one-quarter were couples.

The average income of households totally dependent on transfers in the 55-to-64 group rose from \$11,200 in 1982 to \$12,900 in 2003, while their expenditures jumped from \$11,800 to \$15,400. In the 75-plus group, on the other hand, income went from \$12,500 to \$17,000 and expenditures from \$11,900 to \$17,200 (Table 5). The higher income of the 75-plus group in 2003 can be attributed to the maturity of the C/QPP, resulting in more recipients as well as higher benefits, and to inflation-adjusted payments from other programs. In spite of such increases in income, 42% of these households spent more than their income in 2003 compared with 35% in 1982; the corresponding proportions for households in the 55-to-64 group were 62% and 53%.

Because of lower incomes, households with their entire income from government transfers paid very little in personal taxes or security contributions. Instead, they spent their income on personal consumption. Those 75 plus spent slightly more on gifts and contributions than those 55 to 64. In fact, in both 1982 and 2003, households in the 75-plus group spent, on average, more on gifts and contributions than they did on personal care, recreation, or tobacco and alcohol.

Most of the consumption dollar in households dependent on transfers went for food and shelter, accounting for 52 to 57 cents in 2003, compared with 58 to 65 cents in 1982. The relative share spent on shelter grew over time as rent and home maintenance went up and food dropped. Relatively similar amounts were spent in 1982 and 2003 on transportation and household operations. The major difference between the 55-to-64 and 75-plus groups was in spending on tobacco and alcohol and on health. The former spent more on tobacco and alcohol, the latter on health.



**Table 4 Health expenditure by age of reference person**

	1982				2003			
	Total	55-64	65-74	75+	Total	55-64	65-74	75+
<b>All households<sup>1</sup></b>	<b>2,114.5</b>	<b>1,235.1</b>	<b>609.4</b>	<b>270.0</b>	2003\$ (millions) <b>7,202.7</b>	<b>3,497.0</b>	<b>2,048.7</b>	<b>1,657.0</b>
					%			
Direct cost to household	70.6	63.7	80.5	79.7	70.0	64.9	71.7	78.5
Medicines and pharmaceuticals	24.5	23.3	27.0	24.4	33.1	28.0	37.7	38.0
Eye care	12.7	11.9	13.4	15.2	8.6	9.4	7.9	7.8
Dental services	21.2	19.3	26.0	18.8	16.9	18.2	16.9	14.1
Other services	12.2	9.2	14.2	21.2	11.3	9.2	9.1	18.6
Health insurance premiums	29.4	36.3	19.5	20.3	30.0	35.1	28.3	21.5
<b>Unattached men</b>	<b>84.1</b>	<b>52.9</b>	<b>17.9</b>	<b>13.3</b>	2003\$ (millions) <b>405.1</b>	<b>132.7</b>	<b>99.8</b>	<b>172.6</b>
					%			
Direct cost to household	65.1	62.5	73.9	63.5	69.8	60.8	73.4	74.6
Medicines and pharmaceuticals	23.5	21.6	28.7	23.9	30.7	27.1	33.6	31.8
Eye care	12.5	12.9	15.1	7.3	7.9	7.9	9.0	7.2
Dental services	17.1	17.7	18.4	13.0	17.1	16.0	25.0	13.4
Other services	12.0	10.3	11.7	19.3	14.1	9.8	5.8	22.2
Health insurance premiums	34.9	37.5	26.1	36.5	30.2	39.2	26.6	25.4
<b>Unattached women</b>	<b>284.9</b>	<b>104.1</b>	<b>100.0</b>	<b>80.7</b>	2003\$ (millions) <b>1,085.0</b>	<b>295.4</b>	<b>303.3</b>	<b>486.2</b>
					%			
Direct cost to household	75.3	65.7	83.2	77.8	76.9	69.9	76.6	81.3
Medicines and pharmaceuticals	26.3	30.4	24.3	23.6	36.2	29.9	36.6	39.8
Eye care	16.2	12.8	17.6	18.8	9.1	10.0	9.0	8.6
Dental services	19.5	12.0	27.6	19.2	15.6	15.5	20.9	12.4
Other services	13.3	10.5	13.8	16.3	15.9	14.4	10.1	20.5
Health insurance premiums	24.7	34.3	16.8	22.2	23.1	30.1	23.4	18.7
<b>Couples only</b>	<b>830.3</b>	<b>422.8</b>	<b>303.9</b>	<b>103.5</b>	2003\$ (millions) <b>3,362.3</b>	<b>1,580.8</b>	<b>1,091.8</b>	<b>689.7</b>
					%			
Direct cost to household	72.1	62.2	82.4	82.0	68.9	63.5	71.0	77.8
Medicines and pharmaceuticals	25.9	24.0	27.9	27.8	34.2	29.5	37.9	39.3
Eye care	12.2	10.9	12.7	15.4	7.8	8.3	7.6	6.9
Dental services	21.5	18.1	26.7	20.3	16.9	17.4	17.2	15.4
Other services	12.5	9.3	14.9	18.6	9.9	8.3	8.3	16.1
Health insurance premiums	27.9	37.8	17.6	18.0	31.1	36.5	29.0	22.2

<sup>1</sup> Includes those with children or relatives, and other household types.

Note: Overall mean expenditure by age and type of household is shown in Table 3A.

Sources: Family Expenditure Survey, 1982; Survey of Household Spending, 2003

## Summary

As households age, not only does their income drop but also their spending patterns change. In addition, they tend to become smaller, which may necessitate downsizing or moving to rental accommodation. The loss of earnings as the major income source means

less personal income tax to pay and almost no contributions for security. This lowers expenditures. On the other hand, the proportion of spending on personal consumption as well as gifts and contributions tends to increase. Changes in spending patterns also reflect altered lifestyles.

**Table 5 Mean expenditure of households dependent on government transfers by age of reference person**

	1982				2003			
	Total	55-64	65-74	75+	Total	55-64	65-74	75+
<b>Households</b>	<b>326,300</b>	<b>95,380</b>	<b>134,410</b>	<b>96,500</b>	<b>758,750</b>	<b>174,430</b>	<b>230,750</b>	<b>353,570</b>
<b>Total expenditure</b>	<b>12,910</b>	<b>11,780</b>	<b>14,420</b>	<b>11,930</b>	<b>17,200</b>	<b>15,440</b>	<b>18,580</b>	<b>17,180</b>
<b>Pre-tax income</b>	<b>13,110</b>	<b>11,150</b>	<b>14,930</b>	<b>12,510</b>	<b>16,250</b>	<b>12,880</b>	<b>17,660</b>	<b>16,990</b>
					\$			
Total consumption	12,420	11,650	13,680	11,420	16,270	15,190	17,620	15,920
Food	3,630	3,420	3,890	3,480	3,490	3,140	3,790	3,460
Shelter	3,910	3,730	4,060	3,900	5,500	5,320	5,380	5,670
Household operation	900	860	1,010	760	1,190	1,040	1,240	1,220
Furnishings and equipment	420	350	490	390	620	320	630	750
Clothing	670	610	740	640	610	520	710	590
Transportation	1,040	850	1,320	840	1,930	1,750	2,530	1,640
Health	320	290	330	350	850	640	930	910
Personal care	290	260	310	280	340	230	380	370
Recreation	340	270	450	250	570	660	760	410
Reading and printed material	120	90	150	90	120	80	130	120
Tobacco and alcohol	540	670	660	250	650	1,120	670	400
Miscellaneous	230	220	280	170	380	300	450	380
Personal tax	-10	-80	60	-40	410	40	360	620
Security	40	50	30	40	110	80	180	80
Gifts and contributions	470	160	650	520	410	130	420	550

Note: These households receive all their income from transfers.

Sources: Family Expenditure Survey, 1982; Survey of Household Spending, 2003

All households 55 and over were spending more on personal consumption, income tax and security in 2003 than in 1982. As a result, saving fell from 13% of income in 1982 to only 4% in 2003. Largely because of their higher incomes, couples fared better than unattached individuals.

The key components of household consumption were food, shelter, and transportation, together accounting for 61 to 68 cents of the consumption dollar. The ranking of these components changed for the 55-to-64 group: from food, shelter and transportation in 1982 to shelter, transportation and food in 2003. For those 75 plus, on the other hand, the ranking remained unchanged: shelter, food, and transportation. Households in this group were also spending more out-of-pocket on health in 2003 than in 1982; expenses incurred were for prescribed drugs, other medical and health care services, dental services, and eye care (ranked by relative share of the health dollar).

The proportion of households receiving their entire income from government transfers increased over the 1982-to-2003 period. Nearly two-thirds of these households were unattached individuals—more women than men. Most of their consumption dollar was spent on the two essentials of food and shelter: 52 to 57 cents in 2003 compared with 58 to 65 cents in 1982. The major difference over time in spending of these households by age was that those 55 to 64 were spending more on tobacco and alcohol whereas those 75 and over spent more on health.

### Perspectives

#### ■ Notes

1 Security expenditures include Canada/Quebec Pension Plan, Employment Insurance, and private pension plan contributions.

2 The analysis could have been carried out by splitting older households into only two groups: 55 to 64 and 65 and over. However, this would have masked the expenditure patterns



of households in which the reference person may have opted to delay retirement to after age 65, or in which the spouse or other family members are working. Such situations, more common in 2003 than in 1982, made it desirable to examine a 65 to 74 year-old group, many of whom had some attachment with the labour force—32% had earnings in 2003 compared with 30% in 1982. Although the tables show data for the three age groups, the text makes comparisons mainly between the 55-to-64 and 75-plus groups. In the former, the majority had earnings, whereas in the latter, the majority did not. See Chawla and Wannell (2005) for shifts in expenditures between 1982 and 2001 based on household surveys, and Harchaoui and Tarkhani (2004) and Sauvé (2005) for shifts based on personal expenditure data from the System of National Accounts.

3 Some of the drop in investment income may be due to the decline in the trendsetting bank rate, which fell from 13.96% in 1982 to 3.19% in 2003. Not all households are equally affected by interest-rate fluctuations. For households with large savings, a higher rate will generate more investment income, perhaps encouraging them to spend more. On the other hand, for households with greater consumer and mortgage debt liability, the higher rate may dampen spending as more of their income goes toward discharging debt.

4 Gifts were treated somewhat differently in the 1982 and 2003 surveys. The 1982 questionnaire contained a separate category for gifts, while in 2003 respondents were directed to include them under the relevant subject category (furniture, toys, and so forth), except for clothing. This creates a small upward bias in personal consumption in 2003 relative to 1982.

5 Some of the reduced expenditure on food, clothing and recreation over time may be attributed to a drop in prices for these products and services. This has been brought about largely by increased competition in the retail and wholesale markets, the opening of discount outlets, and changes in tariffs and quotas on imports. Similarly, some reduction in spending on tobacco and alcohol may be due to greater knowledge of their harmful health effects.

6 The SHS does not collect information on the cost of treatment provided by doctors or hospitals under provincial health insurance schemes. Instead, it asks about expenses such as government or private insurance health premiums, prescription drugs, dental and eye care, and services provided by other medical professionals. See also Luffman (2005) for spending by households on prescription drugs.

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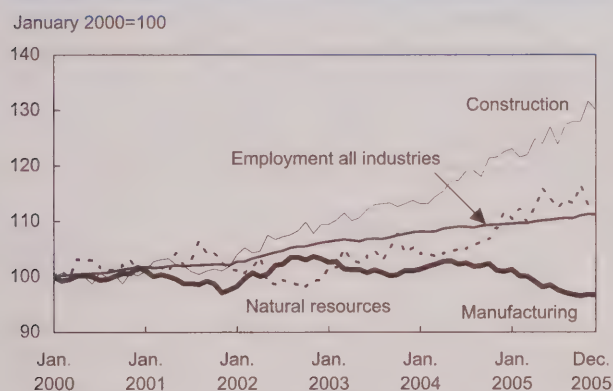
# Recent changes in employment by industry

Vincent Ferrao

Over the last three years, the economy has been affected by several key developments. Low interest rates have led to a boom in home construction in many parts of the country, while strong world demand for oil and other natural resources has created new wealth for some, particularly in western Canada. A soaring loonie has created some challenges, making factory products more expensive to the outside world. In response, manufacturers have had to trim payrolls to stay competitive (Chart A).

This article examines the performance of these three key sectors (construction, natural resources, and manufacturing), looking at the impact on labour markets in resource-rich western Canada and the large manufacturing base in Quebec and Ontario.

**Chart A Construction and natural resources on a hiring binge in recent years while manufacturing falters.**



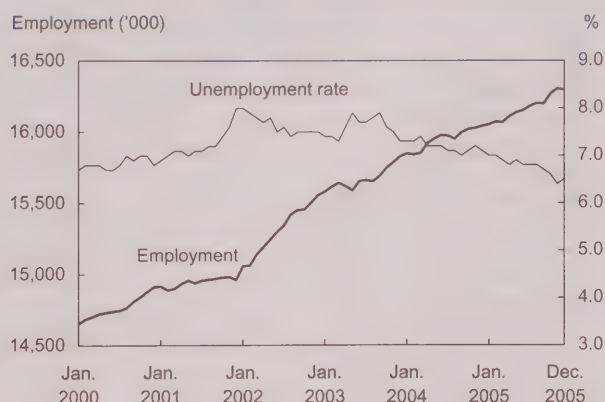
Source: Labour Force Survey, seasonally adjusted

## The Canadian labour market in recent years

Aside from 2001, labour market conditions have been strong in the last six years. In 2005, employment grew by 1.6%, slightly more than in the previous year (Chart B). The steady growth in employment, along with a shrinking pool of available workers, has put a marked dent in the unemployment rate, which declined from 8.0% at the end of 2001 to a low of 6.4% near the end of 2005, the lowest in three decades.

During the first three years of this decade, part-time jobs increased strongly. In contrast, the most recent period has seen the momentum shift towards full-time employment. In 2005, almost all of the 255,000 added jobs were full-time, with adults receiving the lion's share of the overall employment increase that year. Youth, however, had seen a notable jump in employment earlier in the decade (Usalcas 2005).

**Chart B More jobs have pushed unemployment rate down.**



Source: Labour Force Survey, seasonally adjusted

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So with unemployment low and full-time employment on the rise, employee wages rose significantly by the end of 2005. After showing more modest gains in the three previous years, average hourly earnings jumped 3.8% at the end of 2005 compared with the same period in 2004, well above the most recent 2.2% year-over-year increase in consumer prices for December.

### Shifting industrial growth

In a diversified economy such as Canada's, some sectors may experience job losses while others are adding workers. In the late 1990s, manufacturing as well as professional, scientific and technical services (which has a heavy high-tech presence) provided about 40% of the net job gains (Table 1). For the most part, these two industries have not shown the same strength in this decade. In fact, manufacturing was the major source of job losses in 2005.

At the same time, some other industries have sprung into action. The last three years have seen gains in retail and wholesale trade, propelled by growth in consumer spending. Employment has also been added in health care and social assistance and, more recently, in educational services. Government expenditures for health care and social assistance as well as education have been increasing, reflecting increased demand.

Although trade, health and social assistance, and education have been important sources of employment gains, two other industries have grabbed the headlines in recent years: construction and natural resources. These have had the fastest rates of growth since 2002, more than offsetting the decline in manufacturing.

### Manufacturing woes hurt central Canada

During the mid-to-late 1990s, manufacturing was a major source of new jobs. This ended in 2001, when the high-tech meltdown led to major layoffs. More

**Table 1 Employment growth by industry**

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
	% change										
<b>All industries</b>	<b>0.8</b>	<b>1.0</b>	<b>3.0</b>	<b>2.4</b>	<b>2.9</b>	<b>2.0</b>	<b>0.3</b>	<b>4.0</b>	<b>1.7</b>	<b>1.3</b>	<b>1.6</b>
<b>Goods</b>	<b>-0.6</b>	<b>1.5</b>	<b>3.3</b>	<b>1.9</b>	<b>3.6</b>	<b>0.3</b>	<b>-3.0</b>	<b>6.2</b>	<b>-0.2</b>	<b>1.6</b>	<b>-0.1</b>
Agriculture	-5.8	5.1	-2.2	-0.8	-6.0	-11.5	-13.2	14.5	-2.9	-4.3	7.9
Natural resources	0.7	0.2	1.7	-5.3	-3.7	0.4	0.4	-1.9	5.9	6.0	2.2
Utilities	-2.3	-0.3	-8.0	5.5	-2.5	0.9	7.7	3.8	1.9	-5.4	-0.2
Construction	-3.4	-2.6	2.6	5.2	5.6	1.0	1.7	7.4	4.0	7.7	6.1
Manufacturing	1.6	2.7	5.7	2.1	6.1	2.0	-4.0	5.8	-2.1	-0.1	-4.2
<b>Services</b>	<b>1.3</b>	<b>0.8</b>	<b>2.8</b>	<b>2.5</b>	<b>2.7</b>	<b>2.6</b>	<b>1.5</b>	<b>3.2</b>	<b>2.4</b>	<b>1.3</b>	<b>2.1</b>
Trade	1.8	-0.7	0.5	3.3	3.4	4.5	2.0	2.3	1.9	1.5	3.0
Transportation and warehousing	3.0	1.6	3.6	1.1	6.0	3.5	-3.7	3.5	4.0	-4.2	2.3
Finance, insurance, real estate, leasing	1.5	2.2	-1.3	-0.2	0.3	2.8	0.1	2.1	3.4	5.9	1.1
Professional, scientific and technical	3.0	6.5	9.1	10.9	3.4	6.7	-0.1	3.4	-1.7	4.1	5.4
Business, building and other support	7.4	3.1	6.2	3.0	8.8	4.1	2.6	9.7	4.6	0.1	4.8
Education	-0.5	-2.4	1.5	3.1	4.9	-3.8	3.7	2.9	1.6	2.2	8.7
Health care and social assistance	1.4	-0.9	1.5	4.5	0.4	3.6	2.6	6.1	4.0	0.8	-0.9
Information, culture and recreation	3.2	0.3	7.7	0.8	2.0	9.5	1.3	-1.6	4.5	1.6	1.4
Accommodation and food	1.9	2.9	6.4	1.0	3.2	-0.4	2.4	4.6	0.1	2.0	-0.6
Other	-0.3	1.0	7.1	1.4	-1.3	-4.0	0.7	3.1	1.8	-2.8	-3.0
Public administration	-3.9	0.7	-1.9	-3.6	0.5	0.9	2.6	-0.2	4.1	0.1	0.8

Source: Labour Force Survey, seasonally adjusted December data

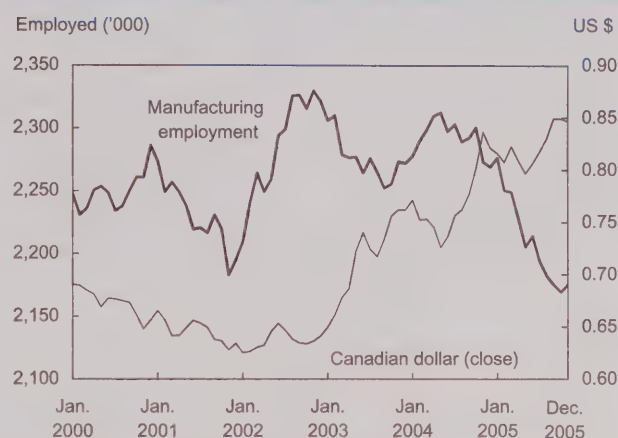
recently, manufacturing has been challenged by the value of the Canadian dollar (which hit a 14-year high in the last quarter of 2005) as well as shortages of some raw materials (Chart C).

The number of jobs in manufacturing has fallen sharply, down 149,000 (-6.4%) since the end of 2002 (Table 2). The difficulties were more pronounced in 2005. After declining by 2.1% during 2003, employment showed little change in 2004, and then proceeded to drop by 4.2% over 2005.

Overall, the decline in manufacturing employment in the last three years is the most significant period of contraction in the industry since the recession of the early 1990s. However, an examination of the most recent three years and the three years ending in 1992 shows that the current weakness in manufacturing pales in comparison. In the early 1990s, factory jobs were declining at twice the rate they are now.

While the recent decline in manufacturing has been widespread, more jobs were lost in certain parts of the sector than in others. Clothing and textiles, for example, saw pronounced losses. Computer and electronic products manufacturing was also down, having still not recovered from the high-tech meltdown. Other affected areas included electrical equipment and appliances, transportation equipment, and wood and paper products.

**Chart C Strong dollar hinders factory jobs.**



Sources: Labour Force Survey, seasonally adjusted; Bank of Canada, monthly average

The most recent drop was experienced in most provinces, but especially Quebec and Ontario. Here employment in transportation equipment manufacturing has been weak. Computer and electronic products manufacturing also continues to decline in both provinces, as does production of electrical equipment and appliances. In the end, manufacturing has declined by

**Table 2 Employment in selected industries**

	December 2005				Change from December 2002			
	Total	Natural resources	Construction	Manufacturing	Total	Natural resources	Construction	Manufacturing
	'000							
<b>Canada</b>	<b>16,294.7</b>	<b>308.7</b>	<b>1,052.1</b>	<b>2,172.8</b>	<b>739.0</b>	<b>39.4</b>	<b>166.5</b>	<b>-148.5</b>
Newfoundland and Labrador	210.9	15.2	11.9	17.8	1.4	3.8	0.8	3.5
Prince Edward Island	68.6	2.2	5.3	7.1	3.8	-0.4	0.8	1.3
Nova Scotia	441.3	15.3	27.3	40.4	13.8	1.1	3.6	-1.3
New Brunswick	355.3	11.0	19.1	36.5	9.0	0.5	-0.6	0.1
Quebec	3,755.0	40.0	185.3	601.8	124.9	0.6	31.8	-68.4
Ontario	6,433.4	35.6	405.2	1,045.3	288.0	3.1	51.3	-60.5
Manitoba	583.6	6.2	30.0	66.5	10.1	0.6	3.7	-2.4
Saskatchewan	479.7	20.4	27.0	30.1	2.1	4.5	2.5	2.6
Alberta	1,799.8	124.4	161.0	130.1	99.9	29.0	15.6	-18.5
British Columbia	2,167.1	36.4	180.4	193.4	186.1	-4.2	59.8	-3.8

Source: Labour Force Survey, seasonally adjusted



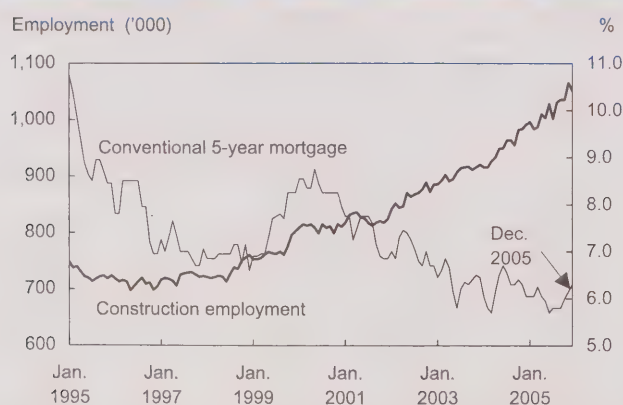
68,000 in Quebec and 61,000 in Ontario in the last three years, accounting for just under 90% of the net loss in manufacturing jobs in Canada over that period.

Job losses have not been limited to the industrial heartland of Quebec and Ontario; most other provinces experienced small but widespread declines. Weakness in manufacturing output, particularly in Quebec and Ontario, has taken its toll on the overall economy of these provinces. In 2004, Ontario's economic growth of 2.7% was slightly below the national average of 2.9%, while Quebec was also below the national average with a 2.3% increase.

### Construction jobs abound in all regions

While manufacturing employment has taken a turn for the worse, times have seldom been better for the construction industry, which has been boosted by low interest rates (Chart D). In the last three years alone, construction employment has risen by about 167,000, an increase of 19%. The gains have been particularly strong in British Columbia (50%), Quebec (21%), Ontario (14%), and Alberta (11%). The value of building permits issued and the number of housing starts have also soared across the country. However, the boom in the construction industry has not been limited to housing (Chart E). In fact, the value of non-residential permits (a leading economic indicator) was 20% higher in October 2005 than the average monthly level in 2004.

**Chart D Low interest rates have stimulated construction jobs across the country.**

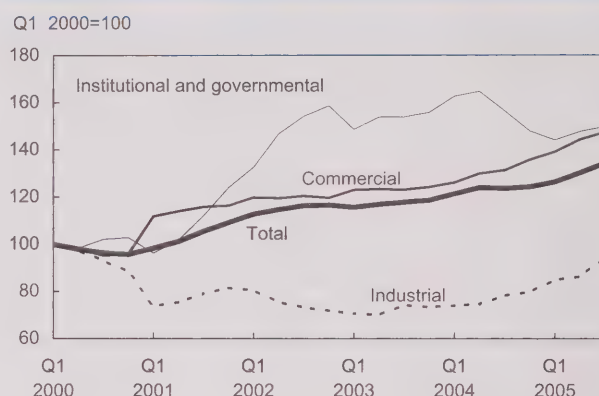


Sources: Labour Force Survey, seasonally adjusted; Bank of Canada, monthly average

Related to the boom in construction is growth in the real estate sector, where employment has increased 29,000 or 15% in the last three years.

The timing of the boom varied by province. Strong employment gains first appeared in Quebec at the start of the decade (2000), with subsequent gains continuing at a more moderate pace. In Ontario, job growth has increased steadily over the past five years.

**Chart E Investment in non-residential building construction on an upward trend.**



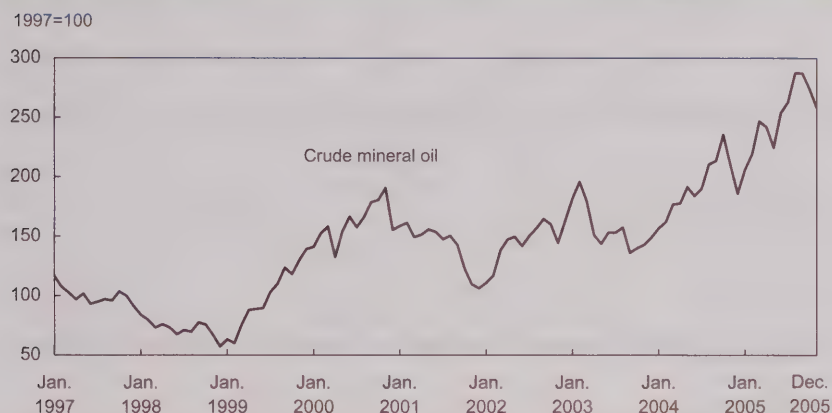
Source: Investment and Capital Stock Division, seasonally adjusted

The boom spread in 2004, especially in Alberta and British Columbia. The latter province showed particularly strong growth, with the industry acting as a pillar of strength for the province's labour market in that year. Over 2005, construction employment in British Columbia continued to grow, although at a more moderate pace. While the number of construction jobs in Alberta seems to have leveled off in 2005, growth was strong in 2004.

### Oil and gas takes off in Alberta

Since the end of 2002, employment in natural resources has risen by just under 40,000, an increase of about 15% (Table 2). The growth has been led by Alberta's oil and gas industry. For a variety of reasons, crude oil prices have skyrocketed in recent years, setting new highs throughout 2005 (Chart F). As a result, employment in the Alberta oil patch has jumped by about 30% in the last three years (Chart G). By the end of

**Chart F Oil prices have been increasing for more than two years.**



Source: Raw Materials Price Index

2005, the region of Athabasca, Grande Prairie, and Peace River had the hottest labour market in the country, with only 2.2% unemployment.

Although the implications for employment were less noticeable in Newfoundland and Labrador, the ramifications for the province's economic growth were very significant. The provincial gross domestic product increased by 6.2% in real terms in 2003, leading the provinces for a second year running, only to edge down 1.4% in 2004, partly because of production problems on the Terra Nova oil platform.

A notable consequence of the jump in crude oil prices was job strength in the oil and gas industry compared with mining. At the end of the 1990s, oil and gas employed fewer people than mining. By 2005, the lead had shifted, with oil and gas employing an average 68,000 workers compared with mining's 60,000. The growth in both industries has had important spin-off

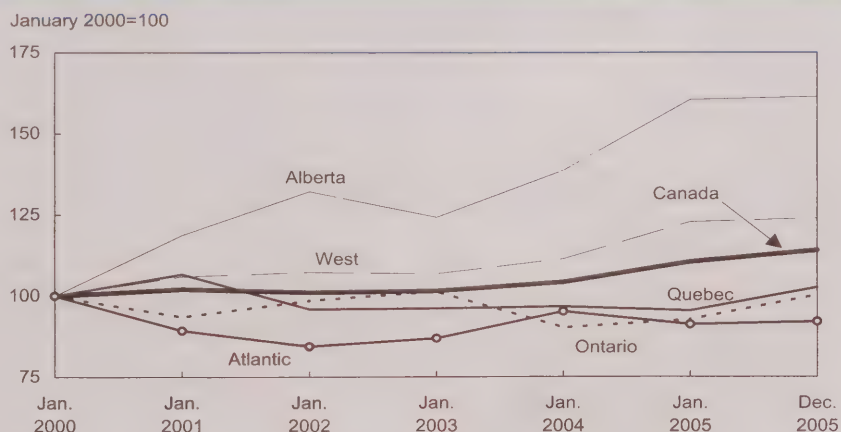
effects. The number of workers employed in support activities almost doubled from 45,000 at the end of the 1990s to 83,000 in 2005 (Table 3).

Compared with other industries, the natural resources sector (forestry, fishing, mining, and oil and

gas) is rather small, accounting for about 2% of overall employment in 2005. In contrast, construction and manufacturing had much larger shares—6% and 14% respectively. However, for Alberta, employment in natural resources is significant, at about 127,000 in 2005 or 7% of overall employment in the province. This compares with 2000 when 83,000 workers in natural resources represented 5% of Alberta's total workforce. Almost all of the natural resources jobs in Alberta are in oil and gas.

All regions of Alberta have benefited from soaring crude oil prices. However, the boom has been especially important to the Calgary area, where the industry now employs about 42,000 workers compared with 27,000 in 1999. Oil and gas extraction employment in the Lethbridge-Medicine Hat area increased fourfold over the same period, reaching 12,000 in 2005. The region of Athabasca, Grande Prairie, and Peace River saw employment in the industry nearly triple to 16,000.

**Chart G The West leads growth in natural resources jobs.**



Source: Labour Force Survey, seasonally adjusted



**Table 3 Employment in natural resource industries**

	1999	2000	2001	2002	2003	2004	2005
	'000						
<b>Total</b>	<b>264</b>	<b>275</b>	<b>279</b>	<b>270</b>	<b>282</b>	<b>287</b>	<b>306</b>
Forestry and logging with support activities	80	86	74	74	77	72	70
Fishing, hunting and trapping	30	29	26	26	27	27	26
Mining, oil and gas extraction	154	160	179	170	178	188	211
Oil and gas extraction	44	46	57	59	59	62	68
Mining	65	65	58	56	55	52	60
Support activities	45	49	65	56	65	74	83

Source: Labour Force Survey

## Summary

A number of economic shocks have occurred in the last few years, affecting regional labour markets. The Canadian dollar hit a 14-year high relative to the U.S. dollar in 2005. Manufacturers dependent on the U.S. market are continuing to operate at a very strong pace, but to maintain profitability, they have been forced to reduce employment. As the number of manufacturing jobs has fallen, growth in other industries has picked up, most notably construction, as a result of the housing boom, and natural resources, as a result of demand for oil and mineral products.

The price of crude oil, which hovered in the US \$50 to \$70 a barrel range during much of 2005, implies good prospects for producing provinces. Strong demand is keeping upward pressure on prices.

Employment in the construction sector surged in the wake of low interest rates, and the housing boom spread to most regions of the country.

Finally, the manufacturing sector, important in central Canada, has had to face major challenges as the Canadian dollar has strengthened. Industries such as clothing and textiles in Quebec and motor vehicle and parts manufacturing in Ontario have struggled.

## Perspectives

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# On the road again

Vincent Dubé and Denis Pilon

**T**rucking plays a major role in Canada's economy. More than 53% of exports to the United States and 78% of all imports were shipped by truck in 2004. But, because of the sector's steady growth, an aging workforce, and the declining popularity of the occupation, the industry may soon face a shortage of qualified truckers. According to one study, 37,000 new drivers will be needed annually in the coming years (CTHRC 2003).

The challenge of recruiting and retaining qualified truckers is also exacerbated by provincial minimum-age regulations and insurance premiums for drivers under age 25. This article presents a recent overall picture of truck drivers based on various sources (see *Data sources and limitations*). Three major facets of the occupation are examined: employment, socio-economic characteristics, and labour market characteristics.

## Structural changes in the job market

According to the Labour Force Survey (LFS), there were approximately 271,000 truckers in Canada in 2004, up 28% from 1987—slightly less than the 29% increase registered for overall employment (Table 1).<sup>1</sup> Nearly two-thirds of truckers worked for an employer whose principal activity was directly associated with transportation and warehousing.<sup>2</sup> This group of workers closely corresponds to the segment of trucking defined as 'for-hire' (see *The trucking industry*), since 95% of them (166,000) work in the truck transportation subsector.<sup>5</sup> After transportation and warehousing, the main employers were manufacturing, wholesale trade and retail trade. Truckers working for employers whose principal activity is not transportation, but who own vehicles primarily intended to transport their own goods, are included in the segment called private truck-

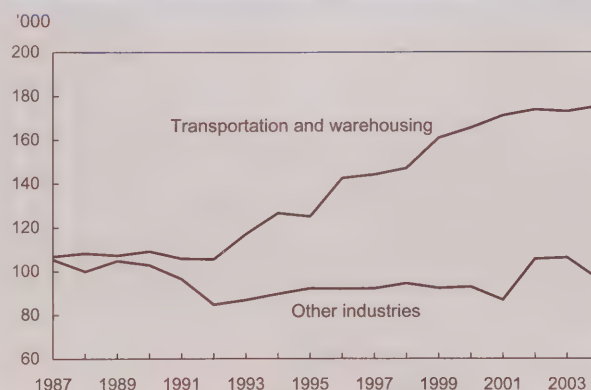
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## Data sources and limitations

No single source provides complete information on truckers. Data are drawn primarily from the **Labour Force Survey** but also from the **Census**, the **Survey of Labour and Income Dynamics**, and the **Quarterly Motor Carriers of Freight Survey**. Because these sources do not cover exactly the same population, estimates will vary. Also, since the surveys do not necessarily have the same reference year, the most recent data have been given precedence. Lastly, considering the great diversity of the trucking sector, caution must be exercised in generalizing results about the occupation as a whole. For various characteristics (for example, wages or hours worked), it is not possible to distinguish between local and long-distance truckers—a major limitation.

ing. While truckers were evenly distributed between the two segments in 1987, the for-hire segment accounted for almost the entire increase subsequently. This appears to be a result of increased outsourcing (Chart A).

**Chart A** Since 1987, transportation and warehousing has seen most of the increase in truckers.



Source: Labour Force Survey



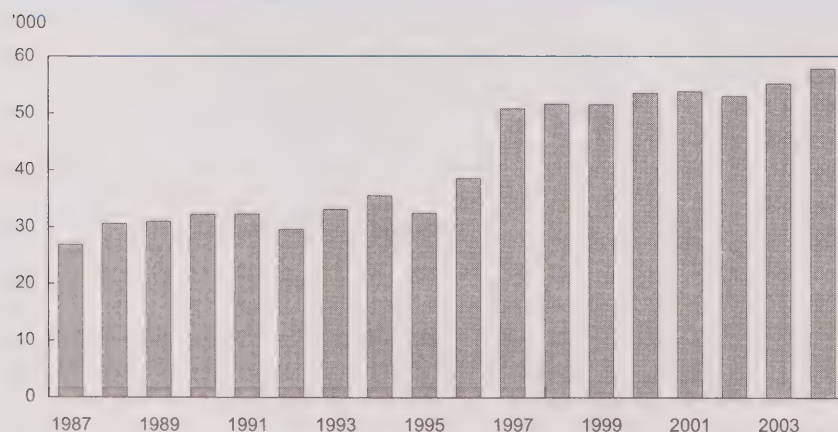
**Table 1 Truckers by industry**

Industries	1987		2004	
	'000	%	'000	%
<b>Industries</b>	<b>212.2</b>	<b>100</b>	<b>271.3</b>	<b>100</b>
Agriculture, forestry, fishing and hunting	2.6	1	2.5	1
Mining, and oil and gas	6.2	3	5.9	2
Construction	14.6	7	13.0	5
Manufacturing	33.9	16	27.0	10
Wholesale trade	14.3	7	21.0	8
Retail trade	15.7	7	11.3	4
Transportation and warehousing	106.8	50	175.3	65
Public administration	4.0	2	2.5	1
Business, building and other support services	1.6	1	3.4	1
Other industries	12.5	6	9.4	3

Source: Labour Force Survey

### Wage earners predominate

Nearly 80% of all truck drivers in 2004 were wage earners. These drivers work for a company and are assigned a truck for a given period. Depending on its size, the company may own a fleet of anywhere from two to more than a hundred trucks (Table 2).

**Chart B The number of self-employed truckers continues to rise slowly.**

Source: Labour Force Survey

Self-employed truckers, on the other hand, have their own equipment (either owned or leased) and are responsible for their own arrangements. They may also have employees to assist them: some 7% had paid help in 2004. Approximately 94% of self-employed truckers were classified as being in for-hire trucking.

Since 1987, the number of self-employed truckers has generally grown slowly. On the other hand, the number of wage-earning truckers has tended more to fluctuate, declining by 13,000 between 2002 and 2004 (Charts B and C).

### A typically male occupation

Despite campaigns to promote non-traditional jobs, women still occupy a marginal place within the occupation. According to the 2004 LFS, 97% of truckers were men. While different factors have contributed to this situation, the number of hours spent outside the home may be a major drawback for women wishing to start a family<sup>6</sup> (Table 3).

### An aging population

Truck drivers constitute a relatively older workforce, with an average age of 42 for wage-earning truckers and 45 for their self-employed counterparts in 2004. Also, a larger proportion were 55 or older: 18%, compared with 13% for workers in general.

Among the 10 most popular of over 500 occupations classified for men, truck driving ranked second behind janitors, caretakers and building superintendents. Trucking has also seen the largest increase in average age since 1987 (Table 4).

**Table 2 Distribution of truckers**

	All occupations	Trucking		
		Total	For-hire	Private
<b>Total jobs</b>	<b>15,949.7</b>	<b>271.3</b>	<b>165.6</b>	<b>105.7</b>
		'000		
		%		
Employees	85	79	67	97
Self-employed	15	21	33	3
With paid help	34	7	6	F
Without paid help	65	93	94	F

Source: Labour Force Survey, 2004

The ratio of entrants (men under 25) to those who will retire over the next 10 years (men 55 and over) underlines the greying of the occupation (Chart D). While the downward slope of the curve is not a positive outcome, the presence of ratios below unity is especially troubling, since it means that more will be leaving than entering the industry (negative flows). For example, the ratio of 0.5 in 2001 indicates that there were twice as many male truckers aged 55 and over as under 25.

To better assess the phenomenon of aging, a second ratio was calculated using those under 30 as the entrant group. Despite a certain lag, essentially the same trend was observed. The year 2004 marked the first time truckers 55 and over outnumbered those under 30.

Unless the situation turns around (as a result of increased immigration, for example; see *Growing proportion of immigrants among truckers*), the occupation may be hit by a large number of retirements in the coming years. However, truckers may be more likely to remain longer in the labour force. For example, trucking was the sixth

most popular occupation among employed men aged 65 and over in 2001—4,255, up 82% from 1996 (Duchesne 2004). Also, a U.S. study found that the turnover rates for older or more experienced truckers tend to be lower, since a change of employment entails greater risks (Min and Lambert 2002). A survey of unemployed truck drivers points in a similar

### Growing proportion of immigrants among truckers

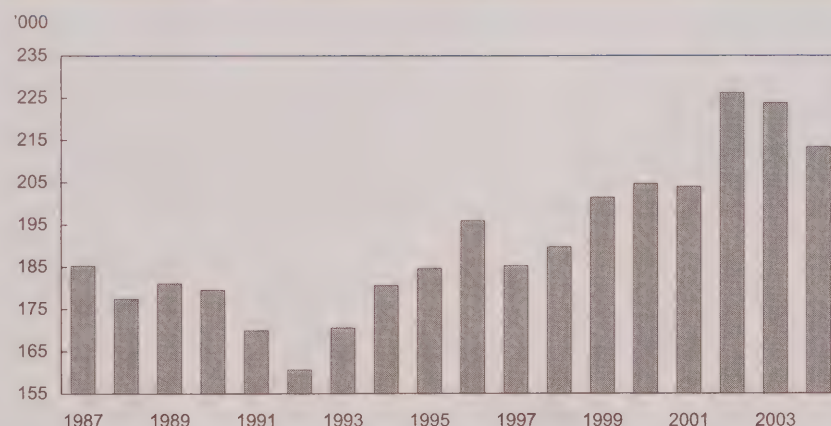
According to the 2001 Census, 13% of truckers in the labour force were immigrants, up 88% since the 1991 Census. Approximately one-third had been in Canada for less than 10 years in 2001, compared with 19% in 1991. Even so, the proportion of immigrants in trucking remained below the 20% for all occupations.

direction with the finding that younger drivers are more likely to resign than older ones (CTHRC 2003).

### Little new blood

Just as worrisome is the lack of young truck drivers. Only 5% of truckers were under 25 in 2004, compared with 15% in the labour force as a whole. Similarly, just over one-quarter of truckers were between 15 and 34, whereas the proportion in the labour force as a whole was 37%.

**Chart C Wage-earning truckers decreased slightly in 2004 for the second straight year.**



Source: Labour Force Survey



## The trucking industry

The Quarterly Motor Carriers of Freight Survey provides a more detailed picture of employment in for-hire trucking (medium and large carriers only).<sup>3</sup> According to this survey, in 2004, 66% of truckers were classified as company drivers (that is, employees); 29% were owner-operators (self-employed); and 5% were paid by personnel agencies.

About three-quarters of truckers were engaged mainly in long-distance (76%) rather than local trucking.<sup>4</sup> The two types differ in several major respects, particularly working conditions. For example, long-distance truckers do not usually return to their home terminal each evening and must keep a daily logbook to comply with the National Safety Code on hours of service.

Approximately 62% of truckers in 2004 hauled mainly general freight as opposed to specialized freight. One of the principal differences between these activities is the type of equipment used. As a rule, general freight is transported on pallets inside standard vans or semi-trailers, while specialized freight requires adapted equipment. Some 16% of truckers worked for employers who hauled mainly 'other specialized freight' (cars, livestock), while 9% worked for employers shipping bulk liquids.

### Distribution of truckers in for-hire trucking<sup>1</sup>

	Total	Company drivers	Owner operators	Agency drivers
<b>Total</b>	<b>126,100</b>	<b>82,600</b>	<b>36,900</b>	<b>6,600</b>
		%		
<b>Overall distribution</b>	<b>100</b>	<b>66</b>	<b>29</b>	<b>5</b>
<b>Activity</b>				
General freight	62	61	77	61
Household goods	3	3	1	2
Liquid bulk	9	9	5	8
Dry bulk	7	7	5	7
Forest products	4	4	1	4
Other specialized freight	16	15	12	17
<b>Distance<sup>2</sup></b>	<b>122,500</b>	<b>79,800</b>	<b>36,200</b>	<b>6,500</b>
		%		
Local	24	26	20	17
Long distance	76	74	80	83
<b>Load</b>	<b>63,000</b>	<b>40,300</b>	<b>18,500</b>	<b>4,200</b>
		%		
Truckload	71	71	69	72
Less than truckload	29	29	31	28

<sup>1</sup> Carriers with annual operating revenues of a million dollars or more.

<sup>2</sup> Excludes household goods moving.

Source: Quarterly Motor Carriers of Freight Survey, 2004

Just over 70% of long-distance truckers carrying general freight were engaged in truckload haulage—carrying freight from a single shipper to its final destination. The rest specialized in less-than-truckload haulage—carrying freight from more than one shipper in a single shipment—which requires the use of truck terminals for assembling freight.

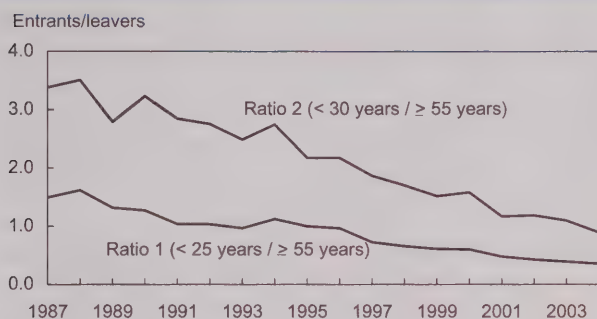
From the standpoint of supply, this seems to indicate that today's young workers are less inclined than the previous generation to enter the occupation. Various reasons are cited—the demanding lifestyle, the poor perception of the occupation, and the appeal of competing occupations (particularly in construction). Only a study of young workers would provide definitive answers.

As to demand for truckers, several factors come into play. First, the minimum age for obtaining a commercial vehicle driver's licence undoubtedly plays a role. In Canada, this ranges between 18 and 20 depending on the province, while in most U.S. states, the age is 21. In practice, the transport companies demand an even higher minimum age than that set by legislation. While this could be related to the high cost of insur-

ance for young drivers (especially in international transport), it is more likely due to the importance given to practical driving experience. In a survey of fleet managers, experience was cited as the decisive factor in hiring a trucker (CTHRC 2003). Furthermore, the minimum experience required to drive a semi-trailer truck was three years.

### Low education levels do not necessarily reflect skills

Overall, truckers have a lower than average education level. Even though the qualification level for the occupation is high school completion, LFS figures show that more than one-third of truckers did not have a high school diploma in 2004, compared with only

**Chart D Truckers are greying more rapidly than other workers.**

Source: Labour Force Survey

14% of all workers. A major reason may be that many employers have not required any diploma or certificate other than the driver's licence corresponding to the type of truck used.<sup>7</sup> Additionally, the larger proportion of older workers in the occupation could also have an impact, since previous generations are generally more likely to have less education.

Also, the training given to truckers is not always reflected by education level (Nix 2003). Although some courses may lead to recognized accreditation, this is not always the case—in-house training by the employer for example. Many professional drivers appear to need training in order to better adapt to the current labour market (MacLeod 2002). However, the issue of training and skills is fairly complex. For example, more education may increase the likelihood of truckers finding a job outside the trucking sector (CTHRC 2003).

### English often used at work

According to the 2001 Census, some 85% of Canadian truckers reported using English as a lan-

guage of work. In Quebec, the proportion was 40%. Measures to make markets more open at the international level under NAFTA have likely also favoured English as a language of work in francophone settings. It is in fact essential that truckers crossing the border be able to function in English with U.S. customs officers.

### Few differences among the provinces

Overall, the distribution of truckers within the provinces was similar to that of the labour force as a whole in 2004 (Table 3). However, British Columbia and Alberta had higher proportions of truckers in private trucking than in for-hire. Conversely, in Ontario, a much larger proportion were in for-hire trucking.

**Table 3 Distribution of truckers**

	All occupations	Trucking		
		Total	For-hire	Private
<b>Total jobs</b>	<b>15,949.7</b>	<b>271.3</b>	<b>165.6</b>	<b>105.7</b>
		'000		
Employees	84.6	78.7	67.2	96.6
Self-employed	15.4	21.3	32.8	3.4
		%		
<b>Age</b>				
15 to 24	15.4	5.4	3.8	7.9
25 to 54	71.5	76.0	77.5	73.7
25 to 34	21.7	20.1	21.2	18.4
35 to 44	25.9	28.9	29.3	28.3
45 to 54	23.9	27.0	27.0	27.1
55 and older	13.1	18.5	18.3	18.9
<b>Sex</b>				
Men	53.2	97.5	97.6	97.3
Women	46.8	2.5	2.4	2.7
<b>Education</b>				
Less than high school	14.4	33.9	34.5	32.9
High school	20.3	27.0	24.5	30.9
Some postsecondary	10.0	8.9	9.5	7.9
Postsecondary certificate or diploma	34.1	27.2	28.6	25.1
University degree	21.2	3.0	3.0	3.1
<b>Province</b>				
Newfoundland and Labrador	1.3	1.1	0.8	1.6
Prince Edward Island	0.4	0.4	0.3	0.7
Nova Scotia	2.8	2.8	2.5	3.4
New Brunswick	2.2	3.3	3.4	3.1
Quebec	23.1	22.3	21.7	23.3
Ontario	39.6	35.6	38.0	31.8
Manitoba	3.6	4.5	4.9	3.9
Saskatchewan	3.0	4.1	4.3	3.7
Alberta	11.0	12.9	12.1	14.2
British Columbia	12.9	13.0	12.0	14.7

Source: Labour Force Survey, 2004



**Table 4 Average age of male employees by occupation<sup>1</sup>**

	1987	2004	Change
<b>All occupations</b>	<b>35.6</b>	<b>38.3</b>	<b>2.7</b>
Truck drivers	37.2	42.4	5.2
Retail persons and sales clerks	30.7	32.4	1.7
Retail trade managers	34.6	39.7	5.1
Farmers and farm managers	33.2	35.9	2.7
Material handlers	32.2	35.6	3.4
Janitors, caretakers and building superintendents	38.5	42.7	4.2
Automotive service technicians, truck mechanics and mechanical repairers	32.9	36.3	3.4
Carpenters	35.6	36.9	1.3
Construction trades helpers and labourers	31.8	32.1	0.3
Food counter attendants, kitchen helpers and related occupations	23.5	24.7	1.2

<sup>1</sup> Top 10 occupations for men according to the 2001 Census.

Source: Labour Force Survey

### Full-time, less unionized, and more in small workplaces

According to the LFS, approximately 97% of wage-earning truckers worked full time in 2004. About one-quarter were unionized, less than the proportion for employees in general (32%). For-hire truckers had a unionization rate about one-third lower than those in private trucking. Furthermore, approximately 78% of wage-earning truckers were in workplaces with less than 100 employees, compared with two-thirds of wage earners overall (Table 5).

### An average wage

The average weekly wage of a wage-earning trucker working full time was \$791 in 2004—approximately \$41,100 per year. This was slightly more than the average for all employees (\$778 per week or

\$40,500 per year). Unionized truckers earned about 11% more than their non-unionized counterparts.

The average weekly wage was slightly higher in for-hire than in private trucking, likely because of differences in the work. For-hire truckers generally do more long-distance haulage; private truckers specialize more in local haulage. Also, long-distance truckers generally earn more, since they tend to work longer hours and make more compromises with respect to their personal and family life.

### Earning their pay

Obviously, a relationship exists between hours worked and earnings. For example, drivers working 70 hours or more per week averaged more than \$1,000 per week. But despite the often higher

rate paid for overtime hours (especially in local freight haulage), the marginal gains of overtime generally fall off. Indeed, a recent American study showed that lower weekly wage rates for truckers are associated with higher probabilities of exceeding the maximum weekly hours allowed under rules governing hours of service (Monaco and Willmert 2003).

### Actual earnings of truckers stagnant

The average weekly earnings of truckers have hardly increased since 1998 (Chart E). In real terms, they rose 2% by 2004 for an average annual growth of approximately 0.3%, compared with 0.4% in all occupations. While the diversity of the trucking sector makes it difficult to generalize, the shortage of qualified truckers has so far not caused wages to rise. Even so, some sectors, such as long-distance haulage, may have registered strong wage increases.

### Seniority and education level have less impact on wages

Seniority appears to play a minor role in trucking, especially in the for-hire portion. While inexperienced workers face some barriers to entry, those who are hired reach a wage ceiling quickly. A comparison of the least experienced workers in for-hire trucking (aged 20 to 24) with the most experienced (55 and over) shows a wage difference of \$100 per week. The comparable figure for wage earners in general was nearly \$350. Hours worked by age group does not appear to be a major factor in the explanation since few differences are apparent in this regard.

**Table 5 Labour force characteristics**

	All occupations	Trucking		
		Total	For-hire	Private
		'000		
<b>Total jobs</b>	<b>15,949.7</b>	<b>271.3</b>	<b>165.6</b>	<b>105.7</b>
<b>Work arrangements</b>		%		
Full-time	81.5	96.5	97.0	95.8
Part-time	18.5	3.5	3.0	4.2
		'000		
<b>Wage earners</b>	<b>13,497.9</b>	<b>213.4</b>	<b>111.3</b>	<b>102.1</b>
<b>Workplace size</b>		%		
Less than 20 employees	33.1	39.0	42.6	35.1
20 to 99 employees	32.9	38.7	37.0	40.5
100 to 500 employees	21.3	17.2	15.8	18.6
More than 500 employees	12.6	5.2	4.6	5.9
Unionized	31.8	25.4	19.8	31.6
Not unionized	68.2	74.6	80.2	68.5
		'000		
<b>Full-time wage earners</b>	<b>11,053.5</b>	<b>206.2</b>	<b>108.1</b>	<b>98.1</b>
		\$		
<b>Weekly earnings</b>	<b>777.73</b>	<b>791.37</b>	<b>828.56</b>	<b>740.40</b>
<b>According to usual hours worked</b>				
Less than 30.0 hours	766.06	775.71	800.03	747.66
30.0 to 39.9 hours	709.09	696.55	709.75	686.94
40.0 to 49.9 hours	768.32	722.74	754.10	698.65
50.0 to 59.9 hours	1,002.22	830.16	832.73	826.29
60.0 to 69.9 hours	1,078.49	917.19	939.01	869.79
70.0 hours or more	1,176.54	1,032.63	1,042.26	1,010.64
		%		
<b>Usual hours worked</b>				
Less than 30.0 hours	15.6	10.1	10.4	9.9
30.0 to 39.9 hours	32.2	11.5	9.3	14.1
40.0 to 49.9 hours	41.6	39.9	33.0	47.4
50.0 to 59.9 hours	6.8	19.3	22.1	16.1
60.0 to 69.9 hours	2.5	12.0	15.6	8.0
70.0 hours or more	1.3	7.2	9.5	4.7
Average	39.5	47.3	50.0	44.4

Source: Labour Force Survey, 2004

Little wage difference exists among male truckers according to education level. In 2004, the gap was less than \$20 weekly between those who had not obtained a high school diploma, those who had, and those with postsecondary education.

### Little wage difference by category of worker

According to the 2001 Census, no major differences were apparent between categories of workers (Table 6). Self-employed truckers nevertheless had a slightly higher annual income than wage earners. However, unlike their employed counterparts, the self-employed are not eligible for benefits, making them less likely to be covered by supplementary medical, dental or disability insurance plans. Without sickness benefits, they are more

likely to incur larger financial losses if illness forces them to stop working (Akyeampong and Sussman 2003). Furthermore, since they are not eligible for an employer-sponsored pension plan, they must save more for retirement.

### Wage-earning truckers have fewer benefits

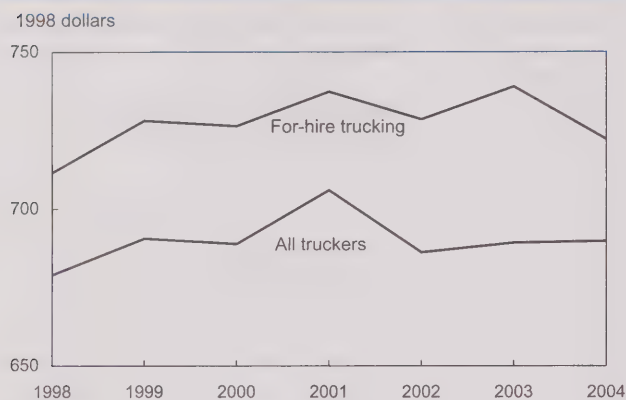
Employer-sponsored benefits, such as insurance and retirement plans, are often taken as indicators of job quality (Marshall 2003). According to the 2002 Survey of Labour and Income Dynamics, a smaller proportion of wage-earning truckers received benefits than workers overall. This is especially so with respect to retirement plans: only 28% of truckers participated in a job-related pension plan, compared with 44% of all wage earners (Table 7). This is consistent with the finding that Quebec trucking companies have relatively low involvement in retirement plans: only about 25% of them offer such plans (Hébert 2005). On the other hand, roughly 50% provide various other insurance plans (such as medical care, prescription drugs, or life insurance).

### Fewer two-income families among truckers

Fewer truckers are in two-income families than workers in general. According to the 2002 Survey of Labour Income Dynamics, approximately 70% of spouses in husband-wife families in which a trucker was the major income recipient had gainful employment, compared with 82% for all workers. This could be because truckers are more likely to work longer hours to support their families (Bess 1999). It may also reflect the



**Chart E Real wages of truckers working full time were relatively stagnant from 1998 to 2004.**



Source: Labour Force Survey

difficulty in reconciling the heavy demands of the occupation—especially time spent outside the home—with the demands on a two-income family.

### Always on the road

Because of the rigours of the job, the highly competitive nature of the sector, and a pay structure that encourages truckers to work more hours to increase their earnings (see *A different system of compensation*), truckers generally put in a very long workweek. According to the LFS, wage-earning truckers averaged 47 hours per week in 2004, with 38% working 50 hours or more. For their part, self-employed truckers

### A different system of compensation

While most wage earners are paid by the hour or by the week, this is not always the case for truckers. While truckers specializing in local transport are often paid by the shipment (or trip), long-distance truckers are generally paid by the distance travelled.<sup>8</sup>

Also, carriers often implement bonus systems—for example, to motivate truckers to maintain good driving records. According to an independent study of the trucking industry in Quebec, some 10% to 15% of companies give premiums on an individual basis while some 20% pay performance premiums. Overall, these premiums may account for 5% to 7% of truckers' earnings (Hébert 2005).

put in 49 hours per week, with 70% working 50 hours or more. One reason for the longer hours could be that self-employed truckers must spend more time on related activities (management tasks, mechanical maintenance, and so forth).

Truckers in for-hire trucking had an even longer workweek. Wage-earners averaged 50 hours, but 47% put in 50 hours or more. Self-employed truckers averaged 55 hours, with 71% clocking 50 hours or more. This difference arises mainly because truckers working for companies that specialize in hauling freight (for-hire trucking) would be more likely to cover long distances (see Table 5). And, these figures may generally underestimate the actual hours worked by long-distance truckers (Bess 1999; Nix 2003). Since they represent hours usually paid or contracted, they may reflect the official hours entered in logbooks, which often exclude much of the time spent not driving but nevertheless worked. Waiting periods, mechanical checks, and customs inspections are typical

examples of activities often entered as rest periods. This practice enables truckers, most of whom are paid on the basis of distance travelled, to keep their hours of service for driving and thus maximize their earnings (Nix 2003).

### Truckers have more irregular schedules

According to the Workplace and Employee Survey, 42% of truckers worked flexible hours in 2001,

**Table 6 Average earnings of truckers working full time, full year**

	Total	Wage earners	Self-employed		
			Total	With paid help	Without paid help
			\$		
<b>Total</b>	<b>38,750</b>	<b>38,770</b>	<b>38,780</b>	<b>39,940</b>	<b>38,230</b>
For-hire	39,230	39,190	39,470	40,400	39,060
Private					
Wholesale trade	36,050	35,970	37,590	38,310	36,910
Manufacturing	41,980	41,940	44,550	F	F
All occupations	43,300	43,450	47,150	55,030	31,470

Source: 2001 Census of Population

**Table 7 Employer benefits**

	All occupations	Company drivers
		%
Dental care	60.0	54.3
Life/disability insurance	59.8	55.3
Medical insurance	65.0	60.8
At least one of the above	67.4	65.2
Pension plan	43.5	28.1

Note: For persons with a paid job. In the case of those with more than one job, data for the main job were used.

Source: Survey of Labour and Income Dynamics, 2002

meaning that start and stop times could vary. The proportion was higher in for-hire trucking—approximately 45%.<sup>9</sup> This type of schedule was more common among truckers than in the technical and trades occupational group (32%) or all occupations combined (34%). Also, more than a third (34%) of truckers did not work the same number of paid hours each week, not counting overtime. This rate is more than double the 15% overall rate (see *A relatively demanding occupation*).

### A relatively demanding occupation

Given that long or irregular work hours may increase stress, it is not hard to imagine the vulnerability of truckers.<sup>10</sup> Added to this are shipper demands for adherence to schedules despite constraints arising from poor road conditions, traffic congestion, customs delays, and so forth. As well, truckers may be away from family and friends for days at a time. According to the Survey of Labour and Income Dynamics, just over 7 in 10 truckers reported their professional and personal life as being very or somewhat stressful in 2002.<sup>11</sup>

Overall, long hours of work appear to have a harmful effect on health, since they lead to unhealthy changes in lifestyle, such as lack of physical exercise, lack of sleep, and poor eating habits (Shields 2000). It is therefore not surprising that male truckers had one of the highest rates of non-participation in the labour market for health reasons or because of an illness-related disability (3.7% compared with 2.6% for all workers), according to Labour Force Survey figures for 2004.<sup>12</sup> Similarly, each trucker lost an average of nine days for these same reasons during the year, compared with six for male workers in general.<sup>13</sup>

### Can truckers take comfort in comparisons?

To obtain a broader picture, the working conditions of truckers were compared with other popular occupations for men, as well as those with the same skill

**Table 8 Average usual hours and earnings for men working full time**

	Hours <sup>2</sup> worked	50 hours or more per week	Hourly earnings	Weekly earnings
		%	\$	\$
With or without a high school diploma	41.3	F	17.32	715.60
<b>Top 10 occupations for men<sup>1</sup></b>				
Truck drivers	47.3	37.7	16.93	792.92
Truck drivers – for-hire trucking	49.9	51.0	16.81	829.56
Retail persons and sales clerks	39.8	7.0	14.09	568.46
Retail trade managers	42.7	15.0	23.63	1,005.57
Farmers and farm managers	48.1	F	13.95	655.94
Material handlers	40.0	1.8	15.58	624.04
Janitors, caretakers and building superintendents	39.6	1.9	14.57	576.83
Automotive service technicians, truck mechanics and mechanical repairers	41.1	4.3	17.80	731.52
Carpenters	41.5	5.9	18.09	749.50
Construction trades helpers and labourers	42.4	13.5	15.75	669.14
Food counter attendants, kitchen helpers and related occupations	37.0	0.0	9.86	367.81
All occupations	40.7	8.2	21.10	856.08

<sup>1</sup> According to the 2001 Census.

<sup>2</sup> Weekly hours usually worked.

Source: Labour Force Survey, 2004



## How big is the trucker shortage?

Even though employers can identify a shortage in an occupation, no universal definition or direct indicator exists to quantify it. One proposed definition describes a shortage as a situation where the demand for workers in an occupation is greater than the supply of workers who are qualified, available, and willing to do the work under the current market conditions (Shah and Burke 2003). Labour shortages are complex and take different forms. For instance, a certain quantity of labour may be available for work whose skills (defined as a combination of experience, education and training) do not match the job or else do not meet the high expectations employers have been used to. The situation could also arise where a pool of qualified workers exists, but would rather work in a different occupation under the current market conditions (recruitment problem).

In the absence of an exact measure, one way to determine the size of a shortage in an occupation is to observe various characteristics (pressure points) of the labour market, such as trends in employment and earnings (Veneri 1999). Growth rates in employment and wages as well as the unemployment

rate have been used here to identify pressure points that have developed in the past three years.<sup>14</sup> Pressure points are observed in an occupation when:

- its annual employment growth is at least 50% higher than the overall rate
- its annual earnings growth is at least 30% higher than the overall rate
- its annual unemployment rate is at least 30% lower than the average for all occupations.

### Pressure points

	Job	Earnings	Unemployment rate, 2004	Pressure points
	Average annual increase 2001-2004 (%)		%	
<b>All occupations</b>	<b>2.2</b>	<b>2.3</b>	<b>7.2</b>	<b>0</b>
Truck drivers	1.8	1.4	5.3	0
For-hire	0.8	1.6	3.9	1
Private	4.2	1.4	7.4	1

Source: Labour Force Survey, 2001 to 2004

Overall, none of these criteria identified pressure points in the trucker occupation in 2004. However, if the analysis is refined, a pressure point is observed in each segment of the trucking sector. First, the unemployment rate in for-hire trucking in 2004 was 46% lower than that observed overall; and second, the average annual employment growth in private trucking from 2001 to 2004 was nearly double that of all occupations. This result is for the occupation as a whole at the national level. In the case of a specific population, such as long-distance truckers in Ontario, the result could be different.

level (high school completion or less). Weekly hours, hourly wages, and weekly wages were used as indicators of working conditions.

Trucking ranked second in weekly hours, behind farmers but far ahead of other occupations. It also ranked second in weekly wages, behind retail trade managers. Truckers' wages were considerably higher than those with a high school diploma or less, but lower than wages for all occupations. Despite the high number of weekly hours, the hourly earnings of truckers fell in the middle of the range. Hourly rates were also fairly similar to those in occupations with the same skill level. However, they remained below hourly earnings for male full-time workers as a group (Table 8).

## Summary

Nearly 271,000 persons worked as truckers in 2004. Four in five were employees, while the others were self-employed (owner-operators). Just over 60% of

all truckers worked directly for a company whose principal activity was truck transport of freight. Overall, truckers are almost exclusively men and tend to be older and less educated than the average. Also, their ranks contain a smaller percentage of immigrants than overall. Truckers earn a wage close to the average for all occupations, but they receive fewer benefits, especially with respect to a pension plan. By the same token, they work many more hours than the average for all occupations, often according to irregular schedules.

## Perspectives

### Notes

1 These are the earliest data available from the LFS. The year 1987 was also when the trucking industry was deregulated under the *Motor Vehicle Transport Act*.

2 In the LFS, industry is determined by the general nature of the activity performed by the employer for whom the respondent works (main job only).

3 These are companies with annual revenues of \$1 million or more and whose purpose is to transport freight for remuneration.

4 A road carrier can engage in both local and long-distance trucking activities. Data on movers are excluded.

5 This subsector includes businesses whose main activity is transporting freight by truck.

6 According to Marshall (1993), women in families with children or with both spouses working generally take on the largest share of household responsibilities.

7 There are additional requirements depending on the type of freight transported (for example, dangerous goods) or the type of equipment used.

8 Rates based on the number of kilometres can vary depending on whether the truck is loaded or empty, weight of the load, type of freight, loading capacity (for example, number of pallets), destination (international, interprovincial or intraprovincial), and so forth.

9 Coefficient of variation indicates that this statistic should be interpreted with caution.

10 According to Williams (2003), the source of workplace stress most often cited by workers in 1994 and 2000 was too many demands or hours on the job.

11 These are persons aged 16 and over with truck driver as their main job.

12 The non-participation rate is the proportion of hours lost in relation to total weekly hours usually worked by all full-time employees. Only full-time male employees were used.

13 The number of days lost per worker is calculated by multiplying the non-participation rate by the estimated number of workable days in the year (250). Only full-time male employees were used.

14 These criteria are a variant of those described and applied by the U.S. Bureau of Labor Statistics (see Veneri 1999).

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# Aging, health and work

Wendy Pyper

As the baby-boom generation nears retirement and population growth slows, concerns of a labour shortage in coming years are being raised. Indeed, the percentage of workers within 10 years of the median retirement age reached 20% in 2002, up from 11% in 1987 (Statistics Canada 2004). On the other hand, more seniors are working. One in 12 seniors aged 65 or older was employed in 2001 (Duchesne 2004), some of them choosing part-time work as a transition to retirement (Pyper and Giles 2002). These trends have spurred a growing body of research focused on prolonging the workforce participation of older workers. The elimination of mandatory retirement and the introduction of workplace practices such as more flexible scheduling are examples of policies to address the issue. However, most attention has been on the majority of workers whose retirement is not health-related.

A recent study, however, indicated that one-third of recent retirees<sup>1</sup> left for health reasons (Morissette, Schellenberg and Silver 2004). The tacit assumption of most retirement research seems to be that deteriorating health is a direct function of aging and little can be done to prolong the careers of these individuals. Yet most people remain physiologically quite resilient into their senior years. Prompt medical intervention and policies favouring rehabilitation and re-integration into the workforce could help prolong careers. Anecdotal reports show that some companies are very effective at re-integrating ill, injured or disabled workers into productive jobs (Johne 2005). Could successful strategies such as flexible hours, appropriate equipment, telecommuting, and job sharing be applied on a broader basis, thereby allowing individuals facing health challenges to remain in or re-enter the workforce? This article uses the 2003 Canadian Community Health Survey (CCHS) to compare the health

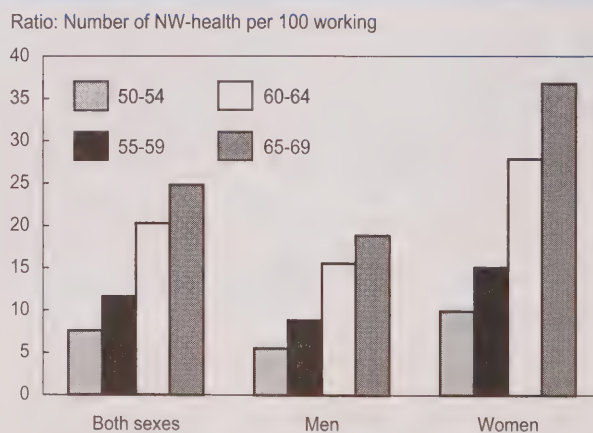
status of working individuals aged 50 to 69 with their contemporaries who are not working for health or other reasons (see *Data sources and definitions*). Chronic conditions and lifestyle choices are also examined.

## More older women not working because of their health

In 2003, of the more than 6 million people aged 50 to 69, almost 4 million were working<sup>2</sup> and over 2 million were not. Reasons for not working include retirement, unemployment, personal or family responsibilities, illness or disability, or being permanently unable to work (Table 1). While retirement was the reason given most often,<sup>3</sup> nearly half a million were not working for health-related reasons.

For every 100 working men aged 50 to 54 in 2003, only 6 were not working because of ill health (Chart A). By age 65 to 69, this had tripled to 19. For women, the ratio was substantially higher and the increase by age larger. For every 100 working women aged 50 to

**Chart A Not working because of ill health increases sharply with age.**



Source: Canadian Community Health Survey, 2003

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**Table 1 Labour force activity of older Canadians**

	50 to 54		55 to 59		60 to 64		65 to 69	
	'000	%	'000	%	'000	%	'000	%
<b>Both sexes</b>	2,198		1,861		1,430		1,155	
Working	1,754		1,250		638		228	
Not working	328	100	521	100	714	100	872	100
Health-related	133	41	145	28	129	18	57	6
Other reasons	195	59	376	72	585	82	816	94
<b>Men</b>	1,083		929		722		549	
Working	931		698		394		153	
Not working	95	100	182	100	280	100	367	100
Health-related	51	54	62	34	61	22	29	8
Other reasons	44	46	120	66	219	78	339	92
<b>Women</b>	1,115		932		708		606	
Working	823		553		244		76	
Not working	233	100	339	100	434	100	505	100
Health-related	82	35	83	25	68	16	28	6
Other reasons	151	64	255	75	366	84	477	94

Source: Canadian Community Health Survey, 2003

54, 10 were not working for health reasons; by age 65 to 69, this had risen nearly fourfold. One of the factors behind the increase is the steep decline (relative to men) in the number of older women working. At age 50 to 54, only slightly more men than women were working (930,900 versus 823,300); by age 65 to 69, this had increased to twice as many (152,800 versus 75,700).

In the youngest age group (50 to 54), 54% of the men who were not working had health-related reasons and indeed reported poor and declining health more often than those working; the percentage for women was 35%. This age group is considered to be of prime working age and likely in their final decade of employment before retirement. Although this age group is not normally thought to be plagued by ill health, health concerns appear to be affecting the employability of some 50 to 54 year-olds, many of whom might take part in the labour force if their health were better or modifications were made to their job or workplace.

### Physical and mental health problems common

Regardless of age, the majority of older workers stated that, overall, they were in excellent or very good health. By contrast, the majority of those not working because of ill health (for example, 72% for 50 to 54 year-olds) rated their overall health as fair or poor (Table 2). Three in 10 reported a health decline since the previous year, compared with 1 in 10 workers or those not working for other reasons.

Health status includes both physical and mental health. Older workers showed a bright picture, with 3 in 4 assessing their mental health as very good or excellent. However, the situation was quite different for those not

working for health-related reasons. Among those in their 50s, almost 25% rated their mental health as fair or poor, compared with less than 5% of those who were working. This indicates troubling times for those who, by virtue of their health, are unable to work.

Stress is another common concern affecting Canadians of all ages. In fact, over a quarter rated their day-to-day lives as quite or extremely stressful (Shields 2004). Stress as a result of work, family or social commitments can lead to a variety of negative consequences including the deterioration of mental and physical health (Shields 2004; Statistics Canada 2001). High stress is associated with developing chronic conditions including back problems and arthritis or rheumatism for both men and women, heart disease for men, and asthma and migraine for women.

Quitting work does not mean an end to stress. Not surprisingly, those not working for reasons other than health were less stressed. Regardless of age, over half reported low stress with relatively few reporting high stress (10%). A bleaker picture emerges for older Canadians who were not working because of poor health. Almost a third reported high stress—more than those working.

Men in their 50s who were not working because of ill health were the most stressed group—close to half aged 50 to 54 reported high stress levels. This may reflect the level of disability or medical condition, the economic cost of not working, or being of prime working age yet unable to work (data not shown).



**Table 2 Self-assessed physical and mental health and stress levels, by age**

	Working	Not working		Working	Not working	
		Health	Other		Health	Other
		%				
		50 to 54			55 to 59	
Current health status						
Excellent or very good	59	9 <sup>E</sup>	49	57	7 <sup>E</sup>	52
Good	32	19	36	32	23	35
Fair or poor	9	72	15	11	70	13
Health compared with last year						
Somewhat or much better	18	15	18	16	14	17
Same	73	52	72	74	50	73
Somewhat or much worse	10	33	10	10	36	10
Current mental health status						
Excellent or very good	76	34	67	74	44	71
Good	19	39	25	21	27	23
Fair or poor	4	23	6 <sup>E</sup>	3	23	4
Self-perceived stress						
Not at all or not very	28	21	52	34	28	56
A bit	42	41	33	41	37	32
Quite a bit or extremely	30	37	14	25	34	11
		60 to 64			65 to 69	
Current health status						
Excellent or very good	53	10 <sup>E</sup>	46	55	8 <sup>E</sup>	41
Good	35	19	37	33	29	38
Fair or poor	12	70	17	12	62	20
Health compared with last year						
Somewhat or much better	14	17	15	12	19 <sup>E</sup>	15
Same	75	50	73	78	46	72
Somewhat or much worse	12	33	12	10	35	14
Current mental health status						
Excellent or very good	75	40	72	76	42	71
Good	20	31	22	20	32	23
Fair or poor	3	17	4	2 <sup>E</sup>	12 <sup>E</sup>	4
Self-perceived stress						
Not at all or not very	41	36	60	49	40	60
A bit	38	35	31	35	34	30
Quite a bit or extremely	21	28	9	15	24	10

Source: Canadian Community Health Survey, 2003

Along with mental health and stress, impaired cognitive function (the ability to remember and to solve day-to-day problems) is a non-physical difficulty that hinders the ability to work. Cognitive problems are generally seen as part of aging and vary in severity.<sup>4</sup>

Over three-quarters of working men in their 50s reported being free of such difficulties, compared with less than half of those not working because of their health (Table 3). Memory and problem-solving abili-

ties are crucial in many jobs, and impairments in these functions appear related to not working for health reasons.

### Mobility is a key concern

Older working men and women had virtually no difficulties with mobility, unlike those not working because of their health. Indeed, among women aged 50 to 54 who were not working for health reasons,

**Table 3 Prevalence of pain and disability days, by age and sex**

	Working	Not working		Working	Not working	
		Health	Other		Health	Other
%						
Men		50 to 54			55 to 59	
No cognitive problems	77	46 <sup>E</sup>	85	77	43	67
No pain	87	25 <sup>E</sup>	95	85	38 <sup>E</sup>	78
Pain intensity, for those with pain						
Moderate or severe	54	94	F	62	90	F
Disability days in last two weeks						
Zero	88	53	89	89	50	88
1 to 7	8	23 <sup>E</sup>	F	8	25	8 <sup>E</sup>
8 to 14	4	23 <sup>E</sup>	F	3	25	F
		60 to 64			65 to 69	
No cognitive problems	71	49	72	71	51 <sup>E</sup>	70
No pain	83	38 <sup>E</sup>	83	83	52 <sup>E</sup>	87
Pain intensity, for those with pain						
Moderate or severe	72	91	60	F	F	80
Disability days in last two weeks						
Zero	90	61	90	90	66	90
1 to 7	6	20	7	8 <sup>E</sup>	15 <sup>E</sup>	6
8 to 14	4	19	3 <sup>E</sup>	F	20 <sup>E</sup>	4
Women		50 to 54			55 to 59	
No cognitive problems	71	57	66	77	53	76
No pain	78	30 <sup>E</sup>	80	80	22 <sup>E</sup>	80
Pain intensity, for those with pain						
Moderate or severe	68	90	F	66	86	71
Disability days in last two weeks						
Zero	81	43	85	82	43	85
1 to 7	15	28	11	14	30	11
8 to 14	5	28	4 <sup>E</sup>	4	26	5 <sup>E</sup>
		60 to 64			65 to 69	
No cognitive problems	76	57	72	72	58	73
No pain	75	43 <sup>E</sup>	80	78	F	70
Pain intensity, for those with pain						
Moderate or severe	67	93	80	F	F	63
Disability days in last two weeks						
Zero	84	46	84	88	59	85
1 to 7	11	32	11	10 <sup>E</sup>	19 <sup>E</sup>	10
8 to 14	4 <sup>E</sup>	21	4	F	22 <sup>E</sup>	4

Source: Canadian Community Health Survey, 2003

half had mobility problems (Chart B). Such difficulties may present a barrier to employment in terms of accessibility—transportation to and from work, and access to the workplace itself (see *Requirements of persons with disabilities*)

### Most older Canadians have at least one chronic condition

Chronic health conditions can result in a financial burden, for both the individual and society, in terms of loss of employment and direct costs for health care. A



## Requirements of persons with disabilities

The 2001 **Participation and Activity Limitation Survey** asked respondents with disabilities aged 50 to 64 if, because of their condition, they required specific job or workplace modifications. Of those who were in the labour force, the most common requirements were modified hours (18%) and job redesign (14%). By contrast, much higher rates were reported by those who were not in the labour force—34% and 31% respectively.

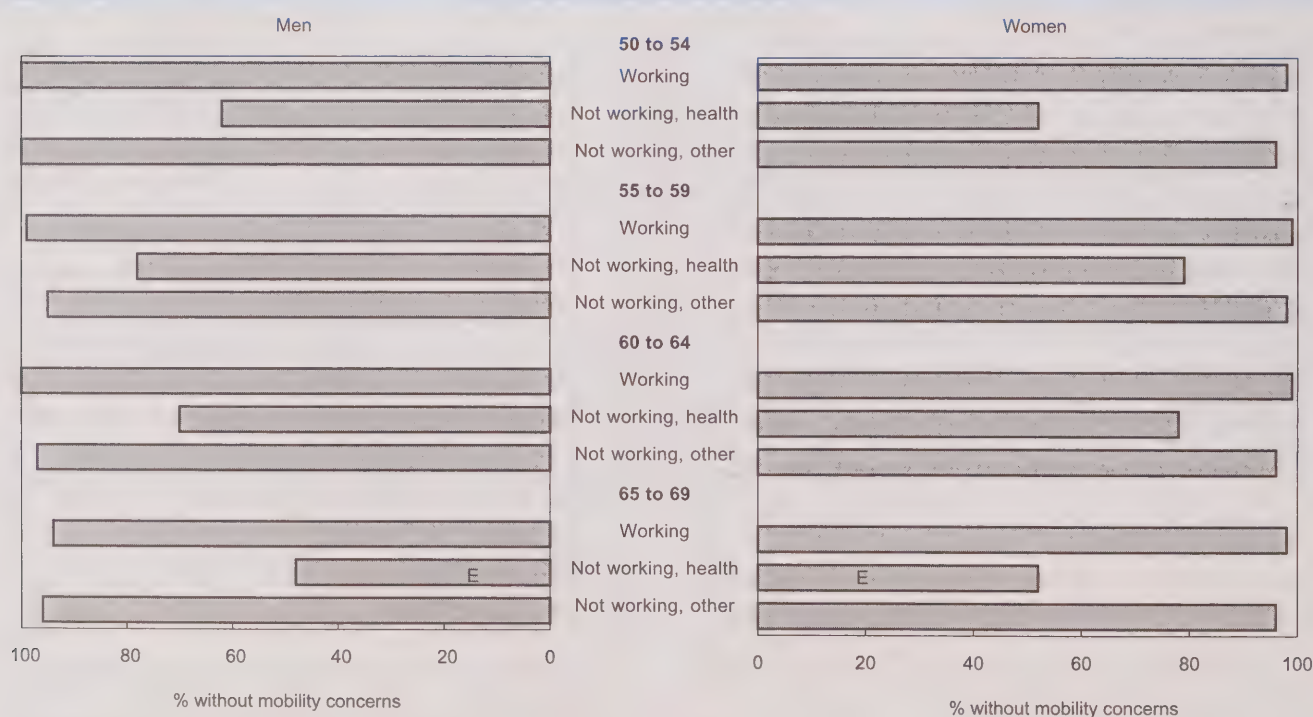
Furthermore, other findings have shown that the group not employed were more likely to have more severe activity limitations (Williams 2006). It is not surprising, therefore, that requirements for physical modifications in the workplace were more common. Accessible elevators (26%), appropriate parking (23%), and handrails or ramps (20%) were mentioned most often by this group. While it is not possible to determine if these people would or could return to work if such changes were made, they illustrate the type of workplace policies that could be put in place.

## Job and workplace modifications required by persons with disabilities aged 50 to 64

	In labour force	Not in labour force
	%	
Job redesign	14	31
Modified hours	18	34
Human support	3 <sup>E</sup>	7
Other equipment or work arrangement	4 <sup>E</sup>	5
Handrail, ramps	4 <sup>E</sup>	20
Appropriate parking	6	23
Accessible elevator	6 <sup>E</sup>	26
Modified features	5 <sup>E</sup>	19
Accessible washrooms	3 <sup>E</sup>	17
Accessible transportation	2 <sup>E</sup>	17

Source: Participation and Activity Limitation Survey, 2001

**Chart B Among those not working because of their health, mobility is a key concern.**



Source: Canadian Community Health Survey, 2003

reduced quality of life is also associated with many chronic conditions.<sup>5</sup> In the long term, some chronic conditions increase the likelihood of developing activity limitations. For both men and women aged 45 and over, heart disease, diabetes, migraine, arthritis/rheumatism and back problems are all associated with increased odds of activity limitation (Statistics Canada 2001). At least one chronic condition was reported by the vast majority of older workers, and virtually all those not working for health reasons (Table 4). Among workers, the likelihood of having a chronic condition increased with age (68% of men 50 to 54 had been diagnosed with a chronic condition compared with 83% aged 65 to 69). Women had higher rates.

Since arthritis, rheumatism or back problems may lead to chronic pain and loss of mobility, people with these conditions may find it difficult to work, particularly at physical jobs.<sup>6</sup> Generally, the prevalence of chronic

health problems among working men and among men not working for reasons other than health was quite similar. These two groups were far less likely to suffer chronic conditions than men not working because of ill health. While one might expect older groups to have arthritis or rheumatism, fully half of men aged 50 to 54 not working because of ill health reported these conditions, compared with roughly 15% of other men. In fact, chronic conditions were often more than twice as likely to be reported by men not working for health reasons than by other men. However, high blood pressure showed a smaller difference. With treatment, this chronic condition need not prevent individuals from working.

For older women not working for health reasons, arthritis/rheumatism was the most commonly reported chronic condition, followed by back problems and high blood pressure. As with men, the

## Data sources and definitions

The main source for this article is the 2003 **Canadian Community Health Survey** Cycle 2.1. The target population is all household residents aged 12 and older living in private occupied dwellings in all provinces and territories, except for Indian Reserves, Canadian Forces bases, and some remote areas. In all, 134,072 households were sampled.

For this article, persons aged 50 to 69 were selected. Individuals were categorized as **working** if they worked all or part of the previous year, **not working for health reasons** if they didn't work at all during the previous year and stated that this was because of their own illness or disability or they were permanently unable to work, or **not working for other reasons**. The latter include caring for their own children or elderly relatives, retirement, labour dispute, and layoff.

To account for survey design, the bootstrap technique was used to estimate variances and coefficients of variation. Differences specified in the text are significant using a p-value of 0.05.

Several self-reported measures of self-perceived overall health are used. **Current health status** refers to the current state of one's overall health. **Health compared with last year** refers to the change in overall health compared with one year ago. **Stress** refers to the amount of stress in most days of the respondent's life.

**Chronic conditions** refer to long-term conditions that were expected to last or had already lasted six months or more and were diagnosed by a health professional. Besides the specific conditions listed in the tables, other conditions were included in the counts for the prevalence of multiple chronic conditions. Among these were cancer, ulcers, effects of stroke, cataracts, glaucoma, chronic bronchitis, and emphysema.

Respondents were asked if they were *usually* free of **pain** or discomfort. For those who were not pain-free, **intensity** relates to the *usual* intensity of the pain or discomfort.

**Disability days** refer to the number of days in the past two weeks the respondent stayed in bed or cut down on activities because of illness or injury.

Several **health behaviours** are included in this study.

**Smoking:** Based on their lifetime cigarette consumption, respondents were categorized as a non-smoker (never smoked), a former smoker (either daily or occasional), or a current smoker (either daily or occasional).

**Alcohol usage:** Based on the previous 12 months of alcohol use, respondents were categorized into three groups: didn't drink at all, never had five or more drinks on one occasion, or had five or more drinks on at least one occasion.

**Body mass index (BMI):** Respondents were asked their height and weight, and a body mass index was calculated. Individuals were categorized using this international standard into three groups: *Least health risk* describes those in the normal range (BMI = 18.5 to 25.0), *increased health risk* those underweight (BMI less than 18.5) or overweight but not obese (BMI = 25.0 to 30.0), and *high-to-extreme health risk* those who are obese (BMI greater than 30.0).

The 2001 **Participation and Activity Limitation Survey** was also used in this article. This postcensal survey collects information on persons with disabilities—those who reported difficulties with activities of daily living or who indicated that a physical or mental condition or health problem reduced the amount or kind of activities they could do. For this article, only those aged 50 to 64 were selected.



Table 4 Selected chronic health conditions, by age and sex

	Working	Not working		Working	Not working	
		Health	Other		Health	Other
%						
Men		50 to 54			55 to 59	
No chronic conditions	32	F	28 <sup>E</sup>	28	F	22
Chronic conditions						
Asthma	4	F	F	6	12 <sup>E</sup>	6 <sup>E</sup>
Arthritis/rheumatism	15	51	14 <sup>E</sup>	17	46	26
Back problems	23	41	23 <sup>E</sup>	21	51	26
High blood pressure	18	41	33 <sup>E</sup>	24	41	27
Migraine	6	27 <sup>E</sup>	F	5	9 <sup>E</sup>	5 <sup>E</sup>
Diabetes	6	21 <sup>E</sup>	F	9	25	10
Heart disease	5	25 <sup>E</sup>	F	8	24	9 <sup>E</sup>
Heart attack	56	F	F	60	60	47 <sup>E</sup>
Urinary incontinence	1 <sup>E</sup>	11 <sup>E</sup>	F	1 <sup>E</sup>	7 <sup>E</sup>	F
		60 to 64			65 to 69	
No chronic conditions	22	F	21	18	F	15
Chronic conditions						
Asthma	5	13 <sup>E</sup>	5	7 <sup>E</sup>	F	5
Arthritis/rheumatism	26	52	29	28	51	34
Back problems	22	44	23	19	44	24
High blood pressure	28	42	34	37	42	37
Migraine	5	11 <sup>E</sup>	4 <sup>E</sup>	3 <sup>E</sup>	F	5
Diabetes	11	30	14	14	26 <sup>E</sup>	16
Heart disease	11	35	13	12	32	18
Heart attack	57	70	53	49	53	57
Urinary incontinence	2 <sup>E</sup>	8 <sup>E</sup>	2 <sup>E</sup>	4 <sup>E</sup>	F	6
Women		50 to 54			55 to 59	
No chronic conditions	21	F	23	15	F	15
Chronic conditions						
Asthma	9	15	8	7	20	9
Arthritis/rheumatism	27	60	28	34	64	35
Back problems	25	58	21	26	52	25
High blood pressure	17	33	25	24	35	26
Migraine	17	27	16	14	29	14
Diabetes	4	17 <sup>E</sup>	5 <sup>E</sup>	5	19	7
Heart disease	2 <sup>E</sup>	13 <sup>E</sup>	F	4	15	6
Heart attack	33 <sup>E</sup>	F	F	22 <sup>E</sup>	58	29 <sup>E</sup>
Urinary incontinence	4	15	4 <sup>E</sup>	4	17	5
		60 to 64			65 to 69	
No chronic conditions	14	F	13	16 <sup>E</sup>	F	9
Chronic conditions						
Asthma	10	25 <sup>E</sup>	8	10 <sup>E</sup>	20 <sup>E</sup>	8
Arthritis/rheumatism	40	63	41	42	68	51
Back problems	23	49	24	24	40	25
High blood pressure	33	48	38	32	58	42
Migraine	12	21	9	5 <sup>E</sup>	16 <sup>E</sup>	10
Diabetes	7	24 <sup>E</sup>	9	7 <sup>E</sup>	32 <sup>E</sup>	11
Heart disease	6	22	7	8 <sup>E</sup>	18 <sup>E</sup>	12
Heart attack	F	33 <sup>E</sup>	38	F	F	32
Urinary incontinence	6	18	6	5 <sup>E</sup>	25 <sup>E</sup>	7

Source: Canadian Community Health Survey, 2003

pattern of health conditions for working women was similar to that of women not working for other reasons. The exception was women aged 65 to 69 where the working group often fared better, indicating that healthy older women are more likely to be working. Also, as with men, women not working because of ill health were often more likely to report chronic conditions. That is, women not working for other reasons had similar health to the working population, while those citing health as their reason for not working appeared to be far worse off.

Working men under 65 were substantially more likely than women to suffer from heart disease. The prevalence for men was often double.<sup>7</sup>

### Almost all those not working because of ill health suffered multiple chronic conditions

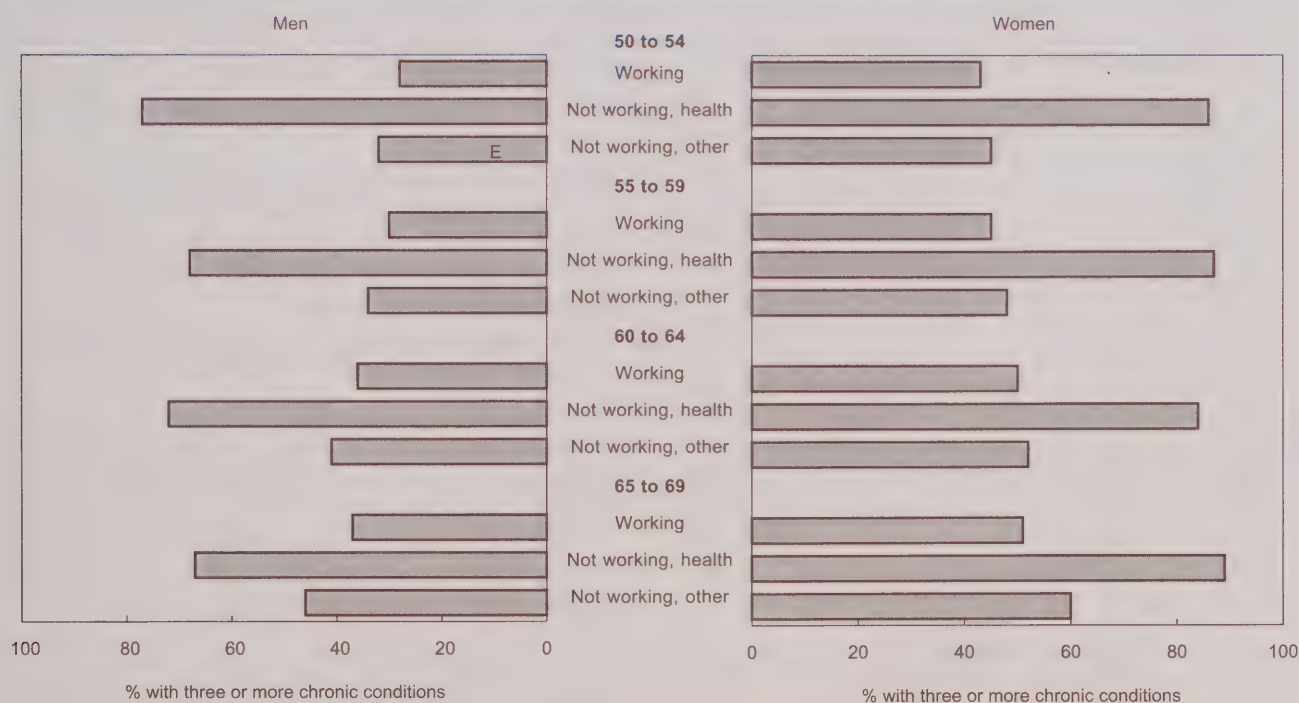
While any one chronic condition may lead to withdrawal from the labour market, having several is strongly associated with not working. Seven in 10 older men who were not working because their health was

poor suffered from three or more conditions; the rate for women was even higher, approaching 9 in 10 (Chart C). Indeed, these rates were much higher than for the working population and those not working for other reasons.

### The impact of pain is clear

Chronic pain leads to more disability days, hospital days, and doctor's visits (Millar 1996). Sleep disorders are also common among chronic pain sufferers. Several chronic conditions experienced by older people—for example, arthritis, rheumatism, back problems and migraine—can cause pain, thereby affecting quality of life and the ability to work. Indeed, of those not working for health reasons, far fewer were pain-free (25% for men 50 to 54), compared with those working (87%) (Table 3). A generally smaller proportion of women than men reported no pain. This may not be surprising since incidences of several painful conditions such as arthritis/rheumatism, back problems and migraine are higher for women.

**Chart C Multiple chronic conditions affect those not working for health reasons, especially women.**



Source: Canadian Community Health Survey, 2003



The degree of pain is also important and plays a part in the relationship between working and not working. Substantially more of those not working for health reasons reported moderate or severe pain levels (roughly 9 in 10 in each age group) compared with those who were working.

To quantify the impact of health problems, the CCHS collected information on the number of days individuals stayed in bed or cut down on their activities in the two weeks prior to the interview. While this does not distinguish relatively minor illnesses from more serious ones, it does present the overall effect of health problems. Those not working for health reasons reported far more such disability days. This held for both sexes and all age groups. Working women were slightly less likely than men to report no disability days, perhaps because of differences in chronic conditions and pain levels. For older women who were unable to work because of poor health, roughly 1 in 5 reported staying in bed or cutting down activities for 8 to 14 days.

### **Risk factors associated with not working for health reasons**

Smoking, alcohol and obesity affect physical and even psychological well-being, which in turn may affect the ability to work.<sup>8</sup> For older men and women, those not working for health reasons were generally more likely to smoke or have a body mass index in the high-to-extreme health-risk range. For example, for men aged 50 to 54, 42% of those not working for health reasons smoked (34% for women) compared with 26% of those working (22% for women) (Table 5). In terms of body mass index, 30% of women aged 50 to 54 who were not working for health reasons fell into the high-to-extreme range compared with 15% of those working. Although causality cannot be determined, these risk factors appear to be associated with not working for health reasons. Since several chronic conditions (such as arthritis/rheumatism, back problems, diabetes, heart disease and high blood pressure) are related to either obesity or smoking, the conditions themselves may be affecting the ability to work. Changes to smoking, eating and activity patterns, especially before conditions become severe, may help lengthen working life.<sup>9</sup>

Alcohol use does not appear to follow the same pattern. In fact, many not working for health reasons reported not drinking in the previous 12 months. Fully half of those aged 50 to 54 who did not work for

health reasons reported not drinking during the year, compared with generally less than a quarter of those working or those not working for other reasons. This may be due to the group's general poor health and their likely higher use of medication—alcohol being contraindicated in many cases.

### **Conclusion**

In 2003, nearly half a million people between 50 and 69 were unable to work for health-related reasons. Either they were permanently unable to work or they had an illness or disability that prevented them from working.

While most who were working reported excellent or very good health, the majority of those not working for health reasons reported fair to poor health. In addition, 3 in 10 in the latter group reported that their health had declined since the previous year, substantially higher than the 1 in 10 who were working.

A bleak picture appears in the area of mental health among those not working for health reasons. Almost 25% in their 50s reported their mental health as fair or poor, and almost 4 in 10 reported high levels of stress. On the other side of the coin, 3 in 4 workers reported very good or excellent mental health.

While those working rarely faced difficulties getting around, those not working for health reasons often had mobility concerns. Adaptations to the workplace and facilitating transportation may make it easier in this regard.

While many older workers had at least one chronic condition, virtually all of those not working because of ill health had at least one such condition, with the vast majority reporting multiple conditions. Arthritis/rheumatism, back problems, high blood pressure and heart disease are common conditions among those not working for health reasons.

Pain is clearly a concern for older people, especially for those not working because of their health. Only 25% of men 50 to 54 in this situation reported being pain-free, compared with 87% of those working. While the presence of certain chronic conditions is likely behind these differences, alleviating pain could enable some to return to the labour market.

Smoking and unhealthy weight are strongly associated with not working for health reasons. Those not working for health reasons were much more likely than workers to smoke or to have a body mass index within

**Table 5 Lifestyle behaviours, by age and sex**

		Not working			Not working	
	Working	Health	Other	Working	Health	Other
		%				
<b>Men</b>		<b>50 to 54</b>			<b>55 to 59</b>	
Smoking						
Never smoked	19	11 <sup>E</sup>	17 <sup>E</sup>	19	16 <sup>E</sup>	21
Former smoker	55	47	58	59	50	59
Current smoker	26	42	26 <sup>E</sup>	21	34	20
Drinking in past 12 months						
Did not drink	14	50	19 <sup>E</sup>	14	40	18
Never 5 or more drinks on one occasion	40	27	43	46	34	40
5 or more drinks on at least one occasion	46	22 <sup>E</sup>	37	39	25	42
Body mass index						
Least health risk	33	30	46	32	29	36
Increased health risk	47	36	40	47	40	42
High to extreme health risk	20	31 <sup>E</sup>	14 <sup>E</sup>	20	30	22
		<b>60 to 64</b>			<b>65 to 69</b>	
Smoking						
Never smoked	20	17 <sup>E</sup>	18	18	F	17
Former smoker	63	51	67	66	64	68
Current smoker	17	32	16	17	19 <sup>E</sup>	15
Drinking in past 12 months						
Did not drink	15	34	15	19	35	20
Never 5 or more drinks on one occasion	51	45	49	54	51	54
5 or more drinks on at least one occasion	34	20	36	27	13 <sup>E</sup>	25
Body mass index						
Least health risk	35	30	34	34	38	35
Increased health risk	45	46	48	45	37	47
High to extreme health risk	19	24	18	20	24	17
<b>Women</b>		<b>50 to 54</b>			<b>55 to 59</b>	
Smoking						
Never smoked	32	28	42	34	28	36
Former smoker	45	38	39	45	37	47
Current smoker	22	34	19	20	35	17
Drinking in past 12 months						
Did not drink	17	50	25	21	38	26
Never 5 or more drinks on one occasion	62	41	58	63	48	60
5 or more drinks on at least one occasion	20	8	16	15	13 <sup>E</sup>	13
Body mass index						
Least health risk	48	31	42	43	36	44
Increased health risk	33	36	29	36	28	37
High to extreme health risk	15	30	25	18	32	17
		<b>60 to 64</b>			<b>65 to 69</b>	
Smoking						
Never smoked	36	36	39	41	43	42
Former smoker	47	43	46	46	42	43
Current smoker	16	21	15	13	15 <sup>E</sup>	15
Drinking in past 12 months						
Did not drink	24	54	30	27	58	31
Never 5 or more drinks on one occasion	66	43	61	67	39	61
5 or more drinks on at least one occasion	10	F	9	6 <sup>E</sup>	F	7
Body mass index						
Least health risk	44	30	41	45	31 <sup>E</sup>	40
Increased health risk	32	33	37	38	30	40
High to extreme health risk	21	34	19	16	32	18

Source: Canadian Community Health Survey, 2003



the high-to-extreme health-risk range. Workplace initiatives such as programs to quit smoking, exercise, and manage weight may help at least some of those currently at risk to remain in the workforce. The promotion of healthy living generally may lead to improved health among older people, allowing them to remain longer in or return to the workforce.

The upcoming retirement wave of baby boomers is considered a potential cause of future labour shortages. Various policies to prolong workforce participation appear to be encouraging at least some older workers to continue working. However, the elimination of mandatory retirement and the introduction of more flexible workforce practices may not help those with health difficulties. Since their circumstances are different, different measures may be required. Appropriate medical intervention and workplace policies facilitating the participation of these less healthy individuals may allow more older people to remain working, or allow those who have ceased work to return.

### Perspectives

#### ■ Notes

- 1 Recent retirees refers to individuals aged 50 or older who (first) retired between 1992 and 2002. See Morissette, Schellenberg and Silver for more information.
- 2 Over three million were working full time and almost 700,000 part time.
- 3 In the 50-to-69 age group, the majority of those not working for reasons other than health were retired (92% of men and 82% of women). The percentages increased with age. Among those 50 to 54, 53% of men and 37% of women gave retirement as their reason for not working. For those 55 to 59, the percentages were 83% for men and 70% for women, while for those in their 60s, the percentages rose to over 90% for men and 89% for women.
- 4 While a breakdown of the severity of cognitive problems is available, sample sizes are not large enough for analysis.
- 5 Conditions with the highest impact on quality of life for older Canadians are Alzheimer's disease, effects of stroke, epilepsy, urinary incontinence, bowel disorders, cataracts, and bronchitis/emphysema (Schultz and Kopec 2003). This study discusses differences between men and women but not age groups.
- 6 It would be interesting to look at the relationship with occupation. However, people who had not worked during the past 12 months were not asked the occupation of their last job. In fact, occupational differences between men and women may explain some of the differences in the prevalence of certain chronic conditions.

7 It is not known if this difference is partly because women are sometimes not diagnosed with heart disease, since they present with different symptoms.

8 It may also be that not working leads to unhealthy behaviours, or at least contributes to maintaining them.

9 Martel et al. found that unhealthy behaviours may not affect the health of those in middle age but may eventually catch up with seniors.

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# Disability in the workplace

Cara Williams

**T**wo main reasons underlie the increasing interest in the labour market participation of individuals with disabilities. One stems from employment equity and human rights legislation, which ensures access to the labour market for those with disabilities. Examining differences in labour force participation, education, and occupation and industry profiles may allow governments and employers to better target programs and policies for these individuals.

A second and equally important reason is to determine how to include more individuals with disabilities in the labour force. This is motivated by the concern that shortages of labour and skilled workers will develop as a result of an aging population. One possible way to alleviate this impending shortage is to maximize the participation of those with disabilities.

The 2001 Participation and Activity Limitation Survey (PALS) provides insight into how these issues are being addressed (see *Data source and definitions*). This article examines the types and severity of disabilities experienced by those aged 15 to 64 in the labour force. It also compares their educational attainment, the types of occupations and industries they work in, and their income with those of the non-disabled population. Also examined are job and workplace modifications that have been put in place by employers. Finally, the potential additional labour supply is investigated by examining characteristics of people with disabilities who are not in the labour force, looking at types of modifications that would enable them to enter the labour market.

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## People with disabilities in the labour market

Excluding those in institutions, in 2001 some 2.0 million Canadians (10%) between the ages of 15 and 64 lived with some type of disability. Roughly 45% were in the labour force, compared with almost 80% of the non-disabled population. Just under 820,000 persons with disabilities were employed while the remaining 98,000 in the labour force were unemployed. This unemployment rate of 10.7% was much higher than the 7.1% in the non-disabled population (Table 1).

For the 2001 PALS, an index of disability severity was constructed based on the reported intensity and frequency of the limitation. Not surprisingly, labour force participation is inversely related to disability severity. The overall participation rate for those with a disability was about 45%. The rate was substantially higher for those with only a mild disability (63%), falling to only 28% for those with a severe or a very severe

**Table 1 Labour force status by degree of disability**

Age 15 to 64	Non-disabled	Total disabled	Degree of disability		
			Mild	Mode-rate	Severe/very severe
			'000		
<b>Labour force</b>	14,198.0	914.9	409.4	271.6	233.9
Men	7,541.6	465.7	219.1	134.8	111.8
Women	6,656.4	449.2	190.3	136.8	122.1
<b>Employed</b>	13,194.8	817.0	379.8	242.7	194.5
Men	6,984.3	413.7	202.4	120.7	90.6
Women	6,210.5	403.3	177.4	122.0	103.9
<b>Unemployed</b>	1,003.2	97.9	29.6	28.9	39.4
Men	557.3	52.0	16.7	14.1	21.2
Women	445.9	45.9	12.9	14.8	18.2
			%		
<b>Unemployment rate</b>	7.1	10.7	7.2	10.6	16.8
Men	7.4	11.2	7.6	10.5	19.0
Women	6.7	10.2	6.8	10.8	14.9

Source: Participation and Activity Limitation Survey, 2001



disability. Of those not in the labour force, 58% suffered from a severe or very severe disability.

Similarly, as the degree of disability increases, so does the unemployment rate for persons with disabilities. For those with a mild disability, the rate was about 7.2% (about the same as the non-disabled population), compared with 16.8% for those with a severe or very severe disability (Table 1).

In general, unemployment rates were higher for men (11.2% versus 10.2% overall), with a greater disparity at the highest degree of disability (19.0% versus 14.9%).

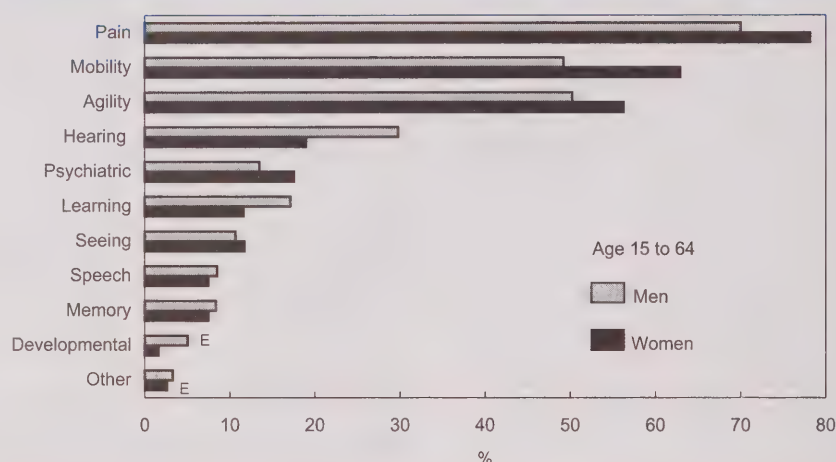
### Various and multiple disabilities

A physical or intellectual disability can come about in different ways. It may be congenital, develop in childhood, or arise later in life through sickness or accident. Some disabilities have little or no effect on a person's ability to work, others necessitate some type of workplace accommodation, while some preclude working at all. Federal, provincial and municipal governments have developed the *In Unison* framework to help those with disabilities join the labour market. This vision aims to "increase the employability of adults with disabilities, encourage entry or re-entry into the labour market, and help promote increased employment and volunteer opportunities. The employment building block depends on access to education and training programs that meet the specific needs of persons with disabilities, making sure jobs are available with the appropriate accommodations, and offering job seekers and employers the information they need." (Canada 2000).

Disabilities experienced by those in the labour force vary. For example, pain was cited by 74% of persons with disabilities, mobility by 56%, and agility by 53%. Hearing was a disability for about 25%, while 16% cited a psychiatric disability, and 14% a learning disability (Chart A). Multiple disabilities were common, with about three-quarters of people having at least two (data not shown).

However, not all disabilities result in activity limitations in the workplace. Among the overall population with disabilities, about 21% of those aged 15 to 64 felt they were not limited at work or school. Not surprisingly, of those with a mild disability who were employed, 53% felt their work was not affected; such was the case for only 8% of those with a severe disability (Table 2).

**Chart A Three-quarters of persons with disabilities in the labour force suffered chronic pain.**



Source: Participation and Activity Limitation Survey, 2001

### Many with disabilities not limited in their current job

It is commonly believed that a disability will affect the amount or kind of work a person can do, putting them at a disadvantage in the workplace. An individual with a disability may be limited in their choice of occupation or where they work. Not surprisingly, the 2001 PALS shows that at some point in the previous five years, about 3 in 10 workers with a disability had to change jobs, one-third the type of work, and about 43% the amount of work.

Even though these changes eased the way for some, about half of workers with disabilities felt their condition limited them in the kind of work they could do in their present job. Individuals with severe or very severe disabilities were more likely to feel this limitation than those with less severe disabilities—for example, 77% with a severe or very severe disability compared with about 35% with a mild disability.

**Table 2 Work limitations**

Age 15 to 64	Total employed	Degree of disability		
		Mild	Mode-rate	Severe/very severe
<b>Total</b>	<b>817.0</b>	<b>379.8</b>	<b>242.7</b>	<b>194.5</b>
		'000		
Condition affects work or school		%		
Sometimes	33.5	32.7	41.1	25.5
Often	25.4	8.0	28.0	56.4
No	34.5	53.0	26.6	8.2
Not applicable	5.9	5.4 <sup>E</sup>	3.7 <sup>E</sup>	9.5
Because condition				
Change kind of work	33.5	22.3	40.3	46.9
Change amount of work	42.9	29.2	47.6	63.6
Change job	28.2	19.6	32.6	39.3
Condition limits kind of work at present job	51.4	34.9	56.7	77.0
Consider self to be disadvantaged in employment	34.3	17.2	41.0	59.1
Considered disadvantaged by your employer	35.4	19.3	41.3	59.5
Condition makes it difficult to change jobs or advance				
Very difficult	20.9	8.0	20.0	47.4
Difficult	23.0	15.9	31.9	25.6
No	49.3	68.8	41.2	21.3
In the past 5 years because of condition have been				
Refused employment	10.6	4.3	12.5	20.8
Refused a promotion	5.9	2.6 <sup>E</sup>	7.0	11.0
Refused access to training	2.8	1.2 <sup>E</sup>	2.0 <sup>E</sup>	6.9
Terminated from job	6.6	3.6 <sup>E</sup>	7.0	12.0

Source: *Participation and Activity Limitation Survey, 2001*

Employer perceptions of a person's disability may affect whether they are hired, get promoted, receive access to training, or remain employed. But while about 35% of workers with disabilities felt their employer would consider them disadvantaged at work, only about 11% felt they had been refused employment because of their disability in the last five years. Only about 7% felt that they had been fired from their job for this reason, and even fewer (3%) felt they had been denied training.

A person with a disability or long-term condition may feel that their opportunity for promotion or ability to change jobs is reduced. Although 44% of workers felt this way, only 6% felt they had been refused a promotion on this basis (Table 2). While refusal rates might be expected to be higher for those no longer in the labour force, this is not the case. On the question of whether in the last five years they had been

refused employment, promotion or training, or whether they had been terminated as a result of their disability, those no longer in the labour force had lower refusal rates than those working.

### Higher education levels among those working

Workers with disabilities are likely to have more education than their counterparts not in the labour force. About one-third of those employed had at least a post-secondary certificate or diploma, compared with 23% of those unemployed and 17% not in the labour force (Table 3). But this is still substantially lower than the general population aged 15 to 64 with no disability, where about 48% had at least a postsecondary certificate or diploma.

### Occupation and industry

Persons with and without disabilities work in similar occupations, the most common being those related to sales and service (Chart B). These were followed by occupations in business, finance and administration, and those related to trades and transport. However, management occupations showed a difference, and here workers with disabilities were less likely to be found (6% versus 11%).

The industries in which persons with disabilities work are mostly the same as for the non-disabled population, with a few notable differences (Chart C). In particular, those with disabilities were more likely to work in health care and social assistance (12% versus 10%), and slightly less likely to work in retail trade (8% versus 11%).



**Table 3 Highest level of education by labour force status for disabled and non-disabled**

Age 15 to 64	Disabled			Non-disabled	
	Employed	Unemployed	Not in labour force	Population	Employed
<b>Total</b>	<b>817.0</b>	<b>97.9</b>	<b>964.7</b>	<b>17,889.9</b>	<b>13,194.8</b>
<b>Highest level of education<sup>1</sup></b>					
Less than high school	22.3	28.2	45.1	25.3	20.9
High school diploma <sup>2</sup>	41.9	46.7	34.9	26.8	25.3
Post secondary diploma/certificate	20.7	15.7	12.0	27.6	33.7
Bachelor's degree and above	13.9	7.5	5.4	20.4	20.1
Use education at job	66.4	...	...	..	..

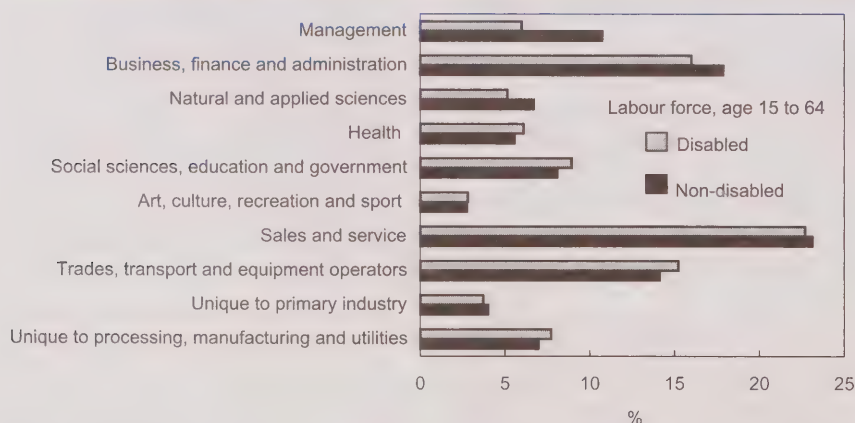
1 May not add to 100 because of some non-response.

2 Includes persons who have attended courses at postsecondary institutions and who may or may not have a high school graduation certificate; excludes persons with a postsecondary certificate, diploma or degree.

Source: Participation and Activity Limitation Survey, 2001

## Volume of work

Among employees with disabilities, about 73% (595,000) worked full time (30 hours or more per week). One-third of the part-timers gave their condition or disability as the reason they worked part time. Another 30% cited going to school, business conditions, or inability to find work with more hours. Despite feeling their condition prevented them from working full time, part-timers had only a slightly higher likelihood of having a severe or very severe disability—29% compared with 22% for the full-time workers.

**Chart B Disabled persons were less likely to be in management occupations.**

Note: Disabled totals may not add because of "unknown" responses.

Source: Participation and Activity Limitation Survey, 2001

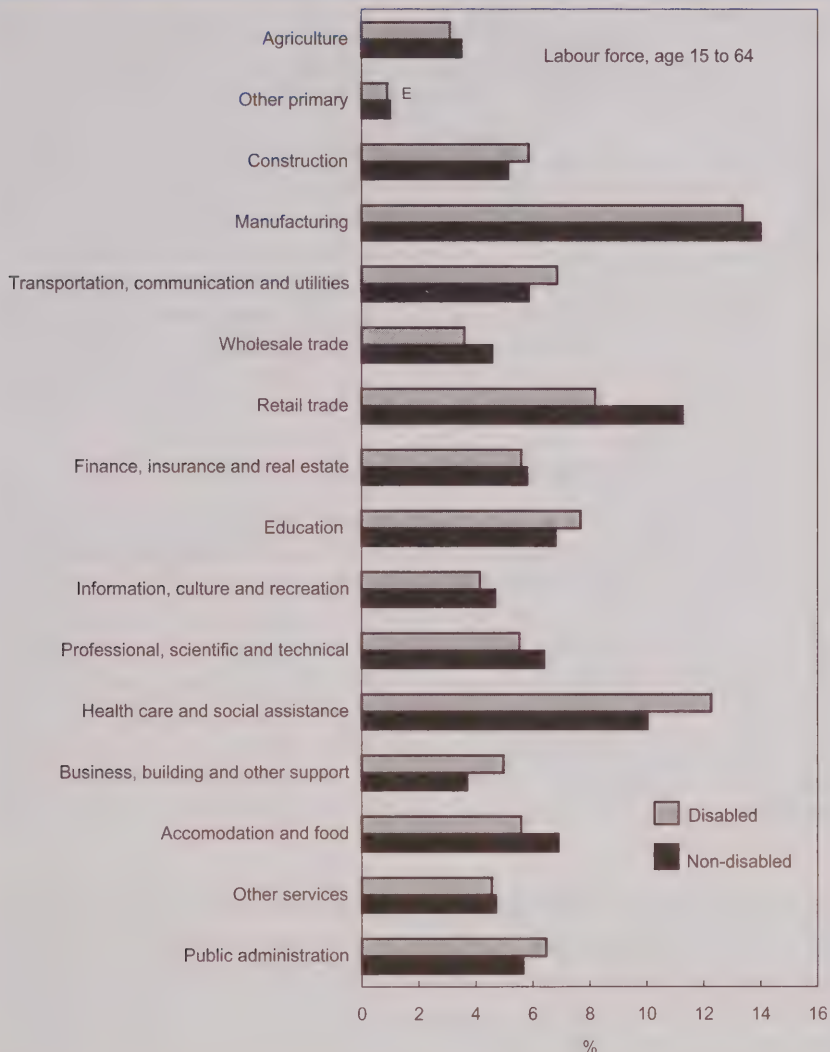
## Income

The median employment income of workers with disabilities was \$22,600—about 17% lower than the \$27,100 for other workers (Chart D). However, this varied greatly depending on the severity of the disability. For example, the median earnings of an employed person with a mild disability were \$7,000 higher than those of someone with a severe or very severe disability. Transfers and other sources tended to smooth out income differences—median total income varied only about \$3,300 between the two groups.

## On-the-job training

In today's economy, workers must continually build and update their skills to keep up with technological advances and open doors to new work experiences. Work-related training can be initiated and paid for by either the employee or the employer. In 2001, just over half of all workers with a disability had participated in work-related training at some point over the previous five years, nearly matching

**Chart C Disabled persons were more likely to work in health care and social assistance.**



Source: Participation and Activity Limitation Survey, 2001

#### Data source and definitions

The Participation and Activity Limitation Survey (PALS), conducted between September 2001 and January 2002, collected information about persons whose everyday activities were limited because of a health-related problem or condition. A sample of 35,000 adults was derived from individuals who answered positively to the activity limitation questions on the 2001 Census form. The survey population was composed of persons in private and some collective households in the 10 provinces. People in the territories, in institutions, and on Indian reserves were excluded.

Information on persons with disabilities was last collected in 1991 through the Health and Activity Limitation Survey (HALS). Major changes made to the structure of the sample and the questions identifying people with disabilities preclude comparison between the 1986 and 1991 HALS and the 2001 PALS.

#### Disability

PALS is based on the World Health Organization's framework of disability provided by the International Classification of Functioning. This framework defines disability as the relationship between body structures and functions, daily activities and social participation, while recognizing the role of environmental factors.

Persons with disabilities are those who reported difficulties with daily living activities or who indicated that a physical or mental condition or health problem reduced the kind or amount of activities they could do. Answers to the disability questions represent respondents' perception of their situation and are, therefore, somewhat subjective.

the 58% for the non-disabled population (Table 4).<sup>1</sup> The most commonly cited reason for taking training among workers with disabilities was for their current or future job (83%), followed distantly by personal interest (8%). This training paid off—over 80%

used the skills they had learned, either somewhat or to a great extent.

However, some workers are unable to take work-related training. In the non-disabled population, about 16% of the employed who did not take training had wanted to but

were unable. For workers with disabilities, the percentage was higher—about 25% (100,000). Their reasons for not taking training varied, but the most common was the high cost (45%).



**Table 4 Training questions**

	Disabled	Non-disabled
	%	
<b>All employed</b>		
Work related training in the past 5 years	50.8	57.5
Took course		
For current or future job	82.7	..
Because of condition	2.8 <sup>E</sup>	..
Personal interest	7.9	..
Other reason	4.7 <sup>E</sup>	..
Use the skills developed from this course		
To a great extent	55.2	..
Somewhat	27.0	..
Very little	8.4	..
Not at all	8.0	..
<b>No training in last 5 years</b>		
Wanted to take some	25.1	16.4
Barriers to training		
Location not accessible	13.3	..
Courses were not adapted to needs	16.0	..
Requested but employer denied	8.0	..
Condition made it impossible	27.6	..
Inadequate transportation	6.9	..
Too costly	44.9	..
Other reasons	30.0	..

Sources: Participation and Activity Limitation Survey, 2001;  
Adult Education and Training Survey, 2002

## Job accommodation

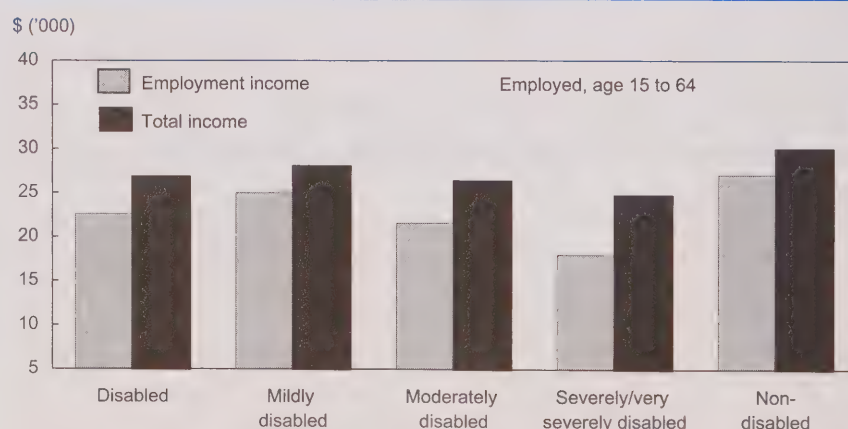
Modifications in the workplace, whether a change in hours, a modified workstation, or an accessible washroom, can enable someone to remain in or join the labour force. In 1982, the *Canadian Charter of Rights and Freedoms* guaranteed the rights of those with physical and mental disabilities. Canada's human rights legislation requires employers to accommodate the accessibility needs of people with disabilities, provided that doing so does not cause undue hardship.<sup>2</sup> While the 2001 PALS did not examine the cost of job accommodation, a recent study by the Canadian Abili-

ties Foundation found that the average annual cost of accommodation per worker would be less than \$500 (Prost and Redmond 2005).

In 2001, the most common accommodations needed by workers with disabilities were modified or reduced work hours (23%) and job redesign<sup>3</sup> (22%) (Chart E). Only a few required physical accommodations such as workstation modifications (7%), appropriate parking (5%), or an accessible washroom (4%). For the most part, job accommodations are granted, although this was not the case for 25% of workers with disabilities. This could be because the accommodation was prohibitively expensive or would have constituted a health or safety risk. The unemployed with disabilities had higher accommodation needs—about 41% required job redesign and 35% required modified or reduced hours.

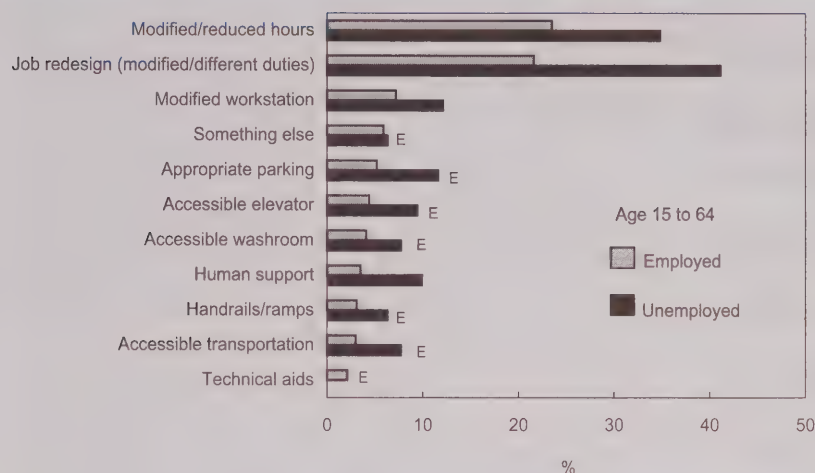
## Increasing the pool of labour

Ensuring access to the labour market for persons with disabilities is more than an individual and human rights issue; the benefits accrue to society as a whole. Although the labour force already includes individuals with disabilities, it could be expanded by encouraging others to join. Moreover, because disability rates increase with age, ensuring workplace accessibility may help some individuals to remain in the labour pool. This in turn will retain the experience and knowledge of many older workers.

**Chart D Workers with disabilities generally had lower earnings.**

Source: Participation and Activity Limitation Survey, 2001

**Chart E Job or schedule modifications were the most common need of workers with disabilities.**



Note: Self-employed were not asked these questions and are not included.  
Source: Participation and Activity Limitation Survey, 2001

Of these individuals, about 422,000 were limited in the kind or amount of work they could do. This is not surprising since, compared with individuals with disabilities in the labour force, those not in the labour force are twice as likely to have a severe or very severe disability (58% versus 26%).

It follows that these people would also be more likely to need workplace modifications. Indeed, more than one-third required job redesign or a modified or reduced work schedule to be able to work, compared with 21% of their counterparts in the labour force (Chart F). Those not in the labour force were also much more likely to require structural changes, such as accessible washrooms and elevators, handrails and ramps, or modified workstations.

A reliable estimate of the potential additional labour supply is difficult to establish since only some of those with disabilities who are not in the labour force would be able to participate. In 2001, about 965,000 people with disabilities between the ages of 15 and 64 were not in the labour force. Of these, about 394,000 said their condition completely precluded working. The remaining 571,000 comprise a potential labour pool.

Thus, in terms of the potential gains in employment for individuals with disabilities who are currently not in the labour force, it is clear that only a portion would be able to work, and most would require some type of job or workplace modification.

## Disability by age

In general, disability rates increase with age. Allowing workers who develop disabilities later in life to remain in the labour force will help ensure an adequate supply of labour. While it is not possible to forecast the disability rates of older workers in the future, the 2001 rates may provide some indication.

Among the working-age population (15 to 64), the overall disability rate was about 10%. However, rates differed by age group. For those 15 to 24, the rate was about 4%, increasing to about 9% for those 25 to 54, and to 22% for those 55 to 64.

The severity of disability also increased somewhat with age. About 31% of 15 to 24 year-olds with a disability rated it as severe or very severe, compared with about 45% of the 55-to-64 age group.

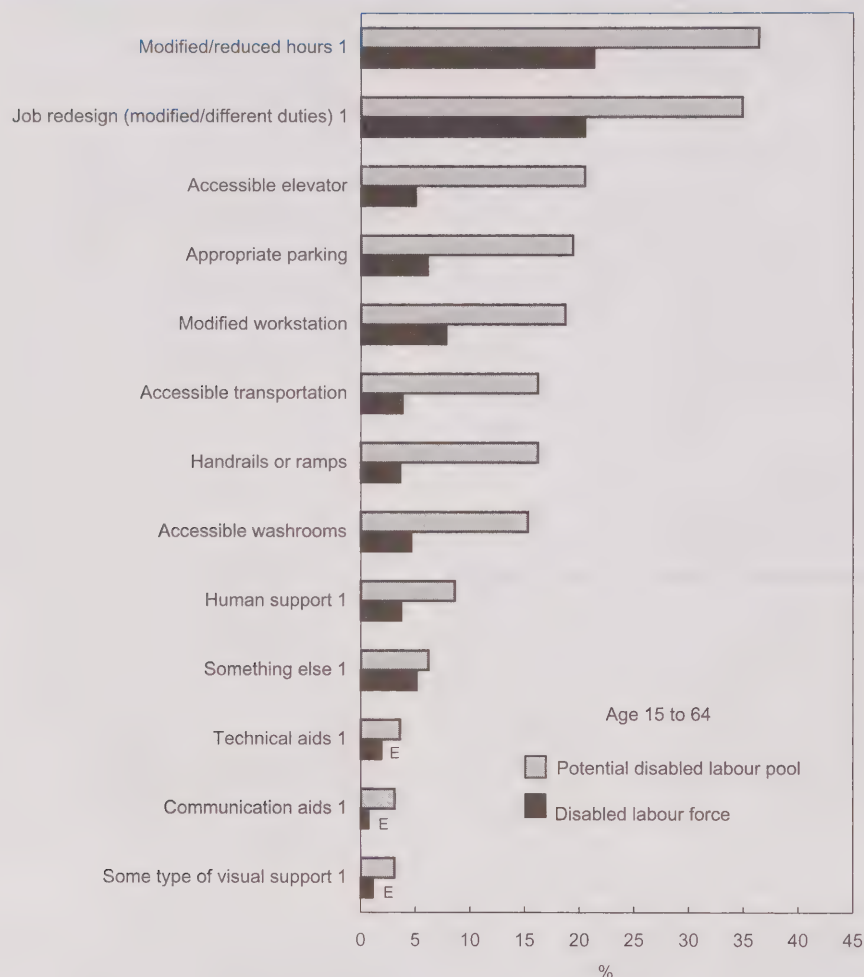
The above factors make it interesting to examine whether labour force participation is different for older and younger workers with disabilities. In 2001, about 611,000 individuals

aged 55 to 64 had a disability—about 22% of the total population that age. Labour force participation rates for persons with disabilities did vary somewhat by age—55% of those aged 25 to 54 were in the labour force compared with 27% of those aged 55 to 64.

Given that age brings with it increasing disability rates and severity of conditions coupled with declining labour force participation, it is important to determine if older individuals with long-term conditions are more likely to have higher workplace accommodation needs. PALS indicates no statistically significant difference between the accommodation needs of older and younger (25 to 54) workers. Given that 73% of people with disabilities aged 55 to 64 are not in the labour force, one might expect them to have more need of workplace modifications. However, this was not the case. Some 42% of those aged 25 to 54 and not in the labour force felt they would need some type of workplace modification compared with 32% of their older counterparts.



**Chart F Job and schedule changes were top priorities to get individuals with disabilities into the labour force.**



1 Self-employed were not asked these questions and are not included.  
 Source: Participation and Activity Limitation Survey, 2001

## Summary

Canada's human rights legislation ensures the right to accommodation in the workplace for people with disabilities. Ensuring access to the labour market for people with disabilities may also be a way to help alleviate an impending labour shortage caused by an aging population. The 2001 Participation and Activity Limitation Survey identified about two million Canadians aged 15 to 64 with disabilities, about 45% of whom were in the labour force. Their disabilities are varied and about 75% have multiple problems.

Having a disability does not necessarily equate to being limited at work. Indeed, about 35% of those employed had no perceived workplace limitation. For others who had accommodation needs, modified hours or job redesign were most common.

For the most part, the occupations and industries employing people with disabilities are similar to those of the non-disabled, the exception being management occupations where the former were half as likely to be found.

The median employment income for workers with disabilities in 2001 was less than that of the non-disabled population. However, for those with a mild disability, employment income was similar to the non-disabled. Transfers and other sources of income smooth out a large part of differences in total income. Median total income varied only about \$3,300 between those with a mild disability and those with a severe one. The median total income of employed individuals with a disability was \$26,800 compared with \$30,000 for their counterparts with no disability.

Of those with a disability who were not in the labour force, about 40% were completely unable to work. Enabling some portion of the remaining 571,000 to work is more likely to require workplace and job accommodation, since they are twice as likely as their working counterparts to have a severe or very severe disability. The most common would be job redesign, modified hours, or physical changes to the workplace.

## Perspectives

## ■ Notes

1 Data on work-related training for the non-disabled population are from the 2002 Adult Education and Training Survey. Reasons for taking work-related training are not comparable with PALS data.

2 Undue hardship refers to the costs associated with accommodation. For example, undue hardship would result if accommodation would make a company insolvent. In addition, it refers to possible health and safety risks. For example, accommodation must not compromise worker safety. Research suggests that the estimated costs of accommodation are fairly low. In 1994, 68% of accommodation costs in the U.S. were under \$500, while the median cost per worker with a disability was \$250 (Cantor 1998).

3 Job redesign refers to modified or different duties.

## ■ References

Canada. Federal, Provincial, and Territorial Ministers Responsible for Social Services. 2000. *In Unison 2000: Persons with Disabilities in Canada*. Ottawa: Human Resources Development Canada.

Cantor, Alan. 1998. *Disability in the Workplace: Effective and Cost-effective Accommodation Planning*. Article based on a presentation at the 1998 National Consultation on Career Development (NATCOM) conference, Ottawa. Internet: [www.cantoraccess.com/natcon98.htm](http://www.cantoraccess.com/natcon98.htm).

Prost, Alar and David Redmond. 2005. "Employers need help with integration." *Canadian HR Reporter*. December 19, 2005. pp. 7, 11.



# What's new?

## *Recent reports and studies*

### ■ FROM STATISTICS CANADA

#### ■ *Emerging patterns in the labour market: A reversal from the 1990s*

Many labour market trends established in the 1990s have been reversed since 2000. Most of these recent trends intensified in the past year. In particular, it was another banner year for the resource sector. These gains were reflected in stronger employment growth in rural areas and in large firms.

In terms of supply, older workers continued to fill the bulk of new jobs. A new trend was full-time positions, which accounted for most of the job growth.

Mining outside of oil and gas led all industries with a 16% surge in jobs last year. This snapped a downward trend that stretched back to 1990 and saw the loss of nearly half of all jobs in this industry. Metal mining was lifted by buoyant prices, many of which hit their highest level in over a decade.

Oil and gas continued to experience double-digit growth. All areas expanded: extraction grew as new developments in the oil sands and offshore Newfoundland came on line, while the search for new sources intensified to replace dwindling conventional supplies.

Construction jobs rose, on top of growth in each of the previous three years. Public sector employment increased, continuing its recovery from cutbacks in the 1990s. Education led the way, as universities stepped up hiring.

Small firms with less than 20 employees continued to lag, as they have for most of this decade. This is a reversal from the previous decade, when small firms dominated job growth, especially in the information and communication technology sector.

Jobs in small towns and rural areas rose 1.3% last year, comparable with the 1.4% gain in urban Canada. Rural employment has matched employment in urban areas since 2001, after lagging at half their growth in the previous decade.

The strength of the labour market was reflected in a sharp move from part-time to full-time employment, especially in Alberta and British Columbia where labour shortages emerged.

The shift to full time began after 2003: since then, full-time positions have risen 4%, while part-time jobs fell outright. All the drop in part-time jobs has been due to a one-third decline in people who could not find full-time work (from 145,000 in 2003 to 96,000 last year).

The growing presence of older workers continued in 2005. The number of workers aged 55 years and over rose by 6.2% last year, compared with a 0.7% increase for workers under 55 years.

For more information, see the February 16, 2006 issue of *The Daily* on the Statistics Canada's Web site ([www.statcan.ca](http://www.statcan.ca)).

### ■ FROM OTHER ORGANIZATIONS

#### ■ *Wage inequality and overeducation*

The existence and persistence of 'overeducation' is explained by an extension of the efficiency wage model. When calibrated to fit the amounts of overeducation found in most empirical studies, the model implies that both the relative wage and the relative employment of high-skill workers depend inversely on aggregate economic activity. Furthermore, keeping aggregate employment constant, low-skill unemployment rises, following an increase in the

relative supply of high-skill labour, and relative wages may be insensitive to changes in relative labour supplies. The model may help to explain rising wage inequality in some countries since the early 1970s. See "Wage inequality and overeducation in a model with efficiency wages" by Peter Skott, *Canadian Journal of Economics*, February 2006, Vol. 39, no. 1, pp. 94-123.

### ■ **Terms of trade risk with partial labour mobility**

The welfare consequences of terms-of-trade risk in a small open economy in which it is costly for workers to move between sectors are examined. Relocation costs lead to partial labour mobility, sectoral wage gaps and income risk exceeding that of an economy in which relocation is costless. Using observed wage differentials and standard values for volatility and preferences, the welfare cost of partial labour mobility alone is found unlikely to be very large, even in the absence of self-insurance arrangements. In addition, modest consumption substitution elasticities significantly reduce these welfare costs. See "Terms of trade risk with partial labor mobility" by Benjamin N. Dennis and Talan B. Iscan, *Journal of International Economics*, January 2006, Vol. 68, no. 1, pp. 92-114.

### ■ **Inequality and labour market performance**

A central issue facing society is the equity/growth trade-off. Conventional economic theory suggests enhanced incentives associated with income inequality should increase growth, but at the expense of "fairness." Recent theories challenge this notion by contending that inequality reduces human-capital investment and increases instability. Nevertheless, empirical evidence from U.S. states and across countries suggests an ambiguous relationship between inequality and income growth. Yet, at the state level, because inequality is related to many negatives, including crime, it can lead to lower utility and out-migration. The negative factors may produce compensating differentials that increase income. Given the inconsistencies regarding income, this study extends the literature by instead examining employment growth, finding long-run job growth to be closely associated with net migration and any utility gains from migration. Thus, examining relative employment growth indicates whether inequality is associated with net-utility gains from a vibrant economy or net-losses from negative

factors. The results suggest that state-level inequality is associated with greater long-run job growth, or enhanced incentives appear to be the dominant factor. See "The Relationship between inequality and labor market performance: Evidence from U.S. States" by Mark D. Partridge, *Journal of Labor Research*, Winter 2006, Vol. 27, no. 1, pp. 1-20.

### ■ **Restructuring of full-time work**

The decade of the 1990s witnessed an unprecedented erosion of the postwar welfare state, with massive restructuring of the labour market away from full-time, sustaining employment. This article examines the experiences of Canadian full-time workers who lost a job because of a company shutdown, relocation, or non-seasonal business slowdown. The longitudinal Survey of Labour and Income Dynamics is used to examine labour market outcomes at 6, 12, 18 and 24 months following the initial job loss in the period 1993–2001, and see the extent to which job displacement in the 1990s resulted in transitional dislocation followed by stable full-time employment, or in new pathways to social exclusion and marginalization. Given that only half of workers who lost their full-time jobs during this period were in stable and full-time employment two years later, the latter outcome is supported. The article further identifies policy alternatives that could lessen the social costs of neo-liberal labour market restructuring in Canada and beyond. See "Restructuring of full-time workers: A case of transitional dislocation or social exclusion in Canada? Lessons from the 1990s" by Susan Silver, John Shields and Sue Wilson, *Social Policy & Administration*, December 2005, Vol. 39, no. 7, pp. 786-801.

### ■ **Cross-country growth and inequality correlation**

A neo-classical model is used to explore the determinants of growth-inequality correlation and to attempt to reconcile the seemingly conflicting evidence on the nature of the growth-inequality relationship. The initial distribution of human capital determines the long-run income distribution and the growth rate by influencing occupational choices. The steady-state proportion of adults that innovates and updates human capital is path-dependent. The output elasticity of skilled-labour, barriers to knowledge spillovers, and the degree of redistribution determine the range of steady-state equilibria. A calibration experiment shows



that skill-intensive technology, low barriers to knowledge spillovers, and high degrees of redistribution characterize the industrial countries with a positive growth-inequality correlation. A negative correlation between growth and inequality arises for the group of non-industrial countries with the opposite characteristics. See "What drives the cross-country growth and inequality correlation?" by Debasis Bandyopadhyay and Parantap Basu, *Canadian Journal of Economics*, November 2005, Vol. 38, no. 4, pp. 1272-1297.

### ■ **Unemployment insurance and experience rating**

Unemployment insurance (UI) distorts layoff decisions by reducing the cost of laying off workers. To dampen the effects, it has been suggested that UI should be financed with an experience-rated tax. Even though increasing the level of experience rating can reduce unemployment, it can reduce the insurance coverage workers receive. With high experience rating, firms may reduce their severance payments by more than the UI benefit. The article proposes a model where competitive firms offer contracts with severance payments to risk-averse workers. Frictions in the labour market lead to incomplete insurance. This article then shows that less than full-experience rating enables the government to increase the insurance coverage workers receive. Welfare implications are also investigated. See "Unemployment insurance and experience rating: Insurance versus efficiency" by Steeve Mongrain and Joanne Roberts, *International Economic Review*, November 2005, Vol. 46, no. 4, pp. 1303-1319.

### ■ **Male-female wage differentials**

The paper outlines the main empirical procedures that are used to document the male-female wage differential and the extent to which it reflects discrimination.

It then discusses the evidence on male-female wage differentials—their existence, the extent to which they reflect discrimination, their changes over time and the factors that influence them. Particular attention is paid to more recent studies that control for a wider range of conventionally unobserved factors. Theoretical perspectives are then outlined, focusing on the issue of how discriminatory wage differentials can survive given the forces of competition. The impacts of policy initiatives are also discussed. See "Viewpoint: Male-female wage differentials: How can that be?" by Morley Gunderson, *Canadian Journal of Economics*, February 2006, Vol. 39, no. 1, pp. 1-21.

### ■ **Training and the earnings of immigrant men**

This paper aims to improve on the existing research on earnings differentials between visible minority immigrants and the native-born, and on the role of discrimination in producing that difference. To do this, the analysis includes: (1) access to training and (2) training effects on earnings growth. Cross-sectional models of access to training and of wage determination, and panel models of wage growth are tested. Some results are consistent with a discrimination interpretation but, considered together, the results are difficult to reconcile with any relatively straightforward discrimination account. See "Training and the earnings of immigrant males: Evidence from the Canadian Workplace and Employee Survey" by Yoko Yoshida and Michael R. Smith, *Social Science Quarterly*, Blackwell Publishing Limited, December 2005 Supplement, Vol. 86, pp. 1218-1241.

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#### Perspectives

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# Key labour and income facts

## *Selected charts and analysis*

This section presents charts and analysis featuring one or more of the following sources. For general inquiries, contact Joanne Bourdeau at (613) 951-4722; [bourjoa@statcan.ca](mailto:bourjoa@statcan.ca).

### **Administrative data**

#### *Small area and administrative data*

Frequency: Annual  
Contact: Customer Services  
(613) 951-9720

### **Business surveys**

#### *Annual Survey of Manufactures*

Frequency: Annual  
Contact: Dissemination agent  
(613) 951-9497

#### *Annual Surveys—Service Industries*

Frequency: Annual  
Contact: Lucie Lussier  
(613) 951-0410

#### *Business Conditions Survey of Manufacturing Industries*

Frequency: Quarterly  
Contact: Claude Robillard  
(613) 951-3507

### **Census**

#### *Census labour force characteristics*

Frequency: Quinquennial  
Contact: Danielle Zietsma  
(613) 951-4243

#### *Census income statistics*

Frequency: Quinquennial  
Contact: John Gartley  
(613) 951-6906

### **Employment and income surveys**

#### *Labour Force Survey*

Frequency: Monthly  
Contact: Marc Lévesque  
(613) 951-4090

#### *Survey of Employment, Payrolls and Hours*

Frequency: Monthly  
Contact: Sylvie Picard  
(613) 951-4003

#### *Employment Insurance Statistics Program*

Frequency: Monthly  
Contact: Sylvie Picard  
(613) 951-4003

#### *Major wage settlements*

Workplace Information Directorate  
(Human Resources and Skills Development Canada)  
Frequency: Quarterly  
Contact: (819) 997-3117  
1 800 567-6866

#### *Labour income*

Frequency: Quarterly  
Contact: Anna MacDonald  
(613) 951-3784

#### *Survey of Labour and Income Dynamics*

Frequency: Annual  
Contact: Client Services  
(613) 951-7355 or  
1 888 297-7355

#### *Survey of Financial Security*

Frequency: Occasional  
Contact: Client Services  
(613) 951-7355 or  
1 888 297-7355

#### *Survey of Household Spending*

Frequency: Annual  
Contact: Client Services  
(613) 951-7355 or  
1 888 297-7355

### **General social survey**

#### *Education, work and retirement*

Frequency: Occasional  
Contact: Client Services  
(613) 951-5979

#### *Social and community support*

Frequency: Occasional  
Contact: Client Services  
(613) 951-5979

#### *Time use*

Frequency: Occasional  
Contact: Client Services  
(613) 951-5979

### **Pension surveys**

#### *Pension Plans in Canada Survey*

Frequency: Annual  
Contact: Patricia Schembari  
(613) 951-9502

#### *Quarterly Survey of Trusteed Pension Funds*

Frequency: Quarterly  
Contact: Bob Anderson  
(613) 951-4034

### **Special surveys**

#### *Survey of Work Arrangements*

Frequency: Occasional  
Contact: Ernest B. Akyeampong  
(613) 951-4624

#### *Adult Education and Training Survey*

Frequency: Occasional  
Contact: Client Services  
(613) 951-7355 or  
1 888 297-7355

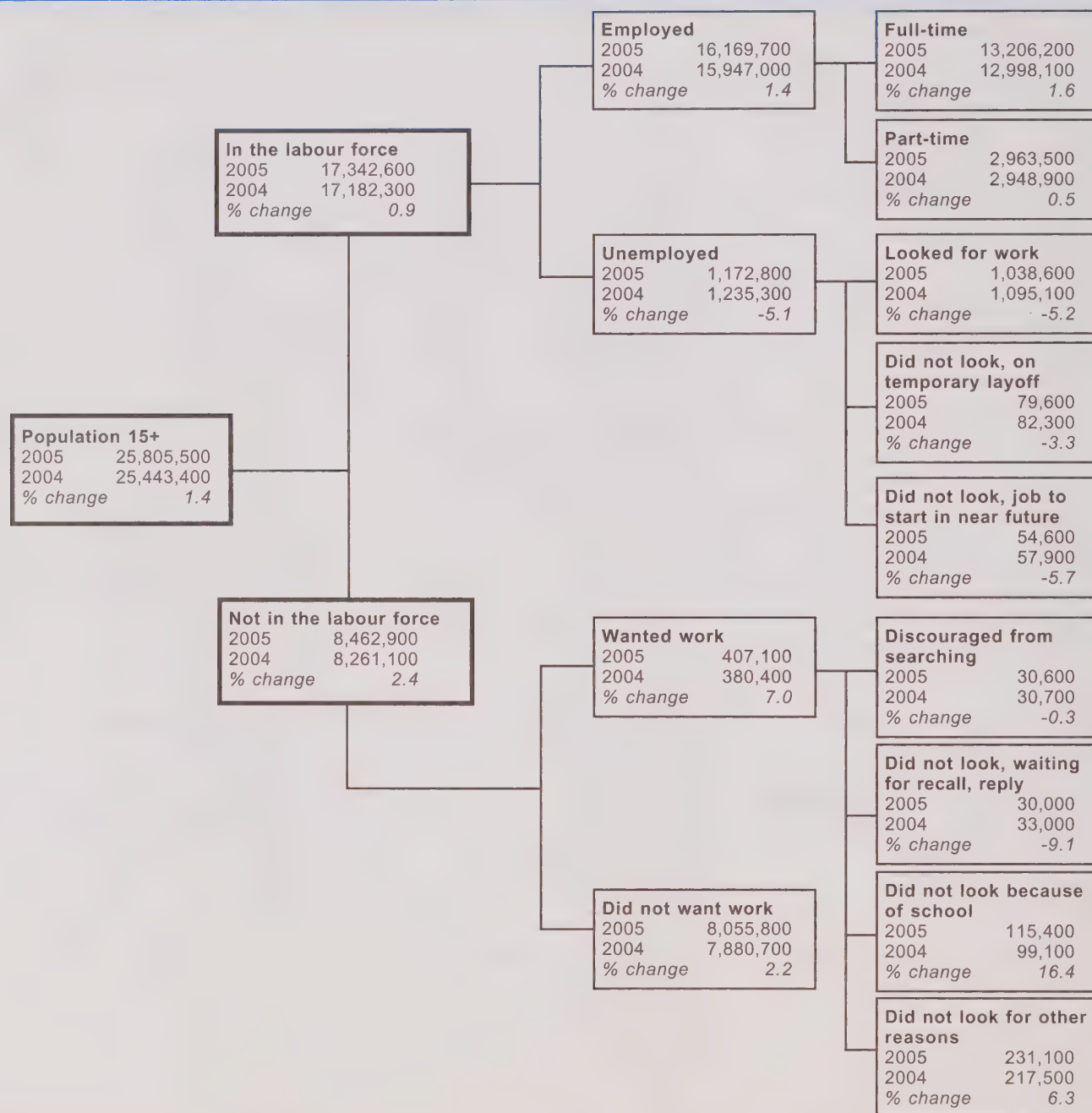
#### *Graduate Surveys*

(Postsecondary)  
Frequency: Occasional  
Contact: Client Services  
(613) 951-7608



# The labour market in 2005

## Labour force status of the population



Source: Labour Force Survey, annual averages

## Large changes for older workers

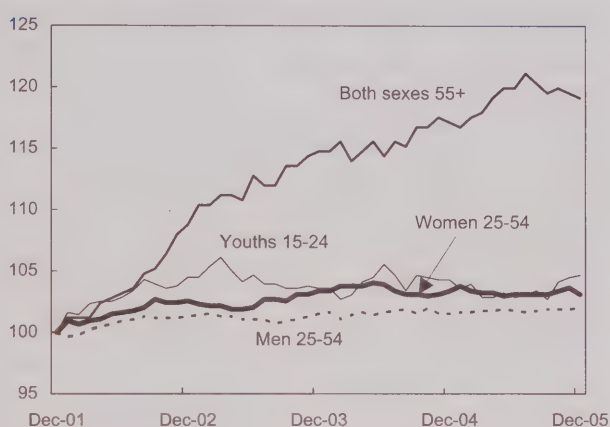
The population aged 15 and over expanded 1.4% between 2004 and 2005. Labour force growth lagged behind at 0.9%, while the rate for those not in the labour force rose 2.4%.

The overall employment growth rate of 1.4% masks a larger increase in full-time job creation (1.6%); the number of part-time jobs also increased by 0.5%. The average number of unemployed fell by 5.1%.

For those not in the labour force, most of the increase was among those who wanted to work (7.0%). The discouraged worker component—those who want work but despair of finding it—fell slightly. Students wanting work but not looking because of school jumped by 16.4%.

The employment rate of men and women aged 55 and over has increased almost 20% since December 2001.

Employment rate index, December 2001=100



Source: Labour Force Survey, seasonally adjusted

	December level			December-to-December change			
	2001	2004	2005	2001 to 2005	2004 to 2005	2001 to 2005	2004 to 2005
	'000			'000		%	
<b>Population 15 and over</b>	<b>24,603.4</b>	<b>25,596.2</b>	<b>25,986.9</b>	<b>1,383.5</b>	<b>390.7</b>	<b>5.6</b>	<b>1.5</b>
Youths 15 to 24	4,149.9	4,255.6	4,302.0	152.1	46.4	3.7	1.1
Men 25 to 54	6,921.6	7,018.6	7,078.2	156.6	59.6	2.3	0.8
Women 25 to 54	6,932.9	7,039.9	7,101.8	168.9	61.9	2.4	0.9
Both sexes 55 and over	6,599.1	7,282.1	7,504.8	905.7	222.7	13.7	3.1
<b>Employment 15 and over</b>	<b>14,961.5</b>	<b>16,040.0</b>	<b>16,294.7</b>	<b>1,333.2</b>	<b>254.7</b>	<b>8.9</b>	<b>1.6</b>
Youths 15 to 24	2,315.3	2,476.6	2,512.5	197.2	35.9	8.5	1.4
Men 25 to 54	5,854.1	6,031.6	6,110.2	256.1	78.6	4.4	1.3
Women 25 to 54	5,136.3	5,389.8	5,428.3	292.0	38.5	5.7	0.7
Both sexes 55 and over	1,655.8	2,142.0	2,243.7	587.9	101.7	35.5	4.7
<b>Unemployment 15 and over</b>	<b>1,305.1</b>	<b>1,220.2</b>	<b>1,135.2</b>	<b>-169.9</b>	<b>-85.0</b>	<b>-13.0</b>	<b>-7.0</b>
Youths 15 to 24	382.6	358.7	338.2	-44.4	-20.5	-11.6	-5.7
Men 25 to 54	466.2	396.4	356.7	-109.5	-39.7	-23.5	-10.0
Women 25 to 54	348.6	338.3	322.1	-26.5	-16.2	-7.6	-4.8
Both sexes 55 and over	107.7	126.9	118.3	10.6	-8.6	9.8	-6.8

Source: Labour Force Survey, seasonally adjusted

The aging of the baby boomers is reflected in the 3.1% growth in the population 55 and over. However, with the improved labour market, employment rose (4.7%) while unemployment dropped (-6.8%).



## Unemployment rates down, employment rates up

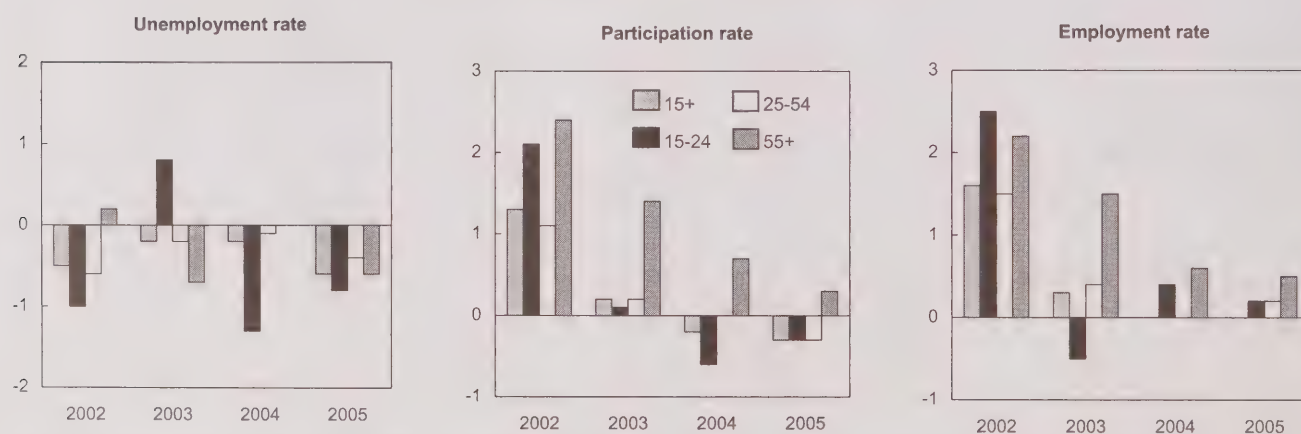
	December level			December-to-December change	
	2001	2004	2005	2001 to 2005	2004 to 2005
		%		%-point	
<b>Unemployment rate 15 and over</b>	<b>8.0</b>	<b>7.1</b>	<b>6.5</b>	<b>-1.5</b>	<b>-0.6</b>
Youths 15 to 24	14.2	12.7	11.9	-2.3	-0.8
Men 25 to 54	7.4	6.2	5.5	-1.9	-0.7
Women 25 to 54	6.4	5.9	5.6	-0.8	-0.3
Both sexes 55 and over	6.1	5.6	5.0	-1.1	-0.6
<b>Participation rate 15 and over</b>	<b>66.1</b>	<b>67.4</b>	<b>67.1</b>	<b>1.0</b>	<b>-0.3</b>
Youths 15 to 24	65.0	66.6	66.3	1.3	-0.3
Men 25 to 54	91.3	91.6	91.4	0.1	-0.2
Women 25 to 54	79.1	81.4	81.0	1.9	-0.4
Both sexes 55 and over	26.7	31.2	31.5	4.8	0.3
<b>Employment rate 15 and over</b>	<b>60.8</b>	<b>62.7</b>	<b>62.7</b>	<b>1.9</b>	<b>0.0</b>
Youths 15 to 24	55.8	58.2	58.4	2.6	0.2
Men 25 to 54	84.6	85.9	86.3	1.7	0.4
Women 25 to 54	74.1	76.6	76.4	2.3	-0.2
Both sexes 55 and over	25.1	29.4	29.9	4.8	0.5

Source: Labour Force Survey, seasonally adjusted

The effect of larger cohorts with relatively high participation and employment rates reaching age 55 is pushing the employment rate among older Canadians steadily upwards (4.8 percentage points since 2001).

Between December 2004 and December 2005, the declining numbers of unemployed lowered unemployment rates for all age groups.

December-to-December percentage point change

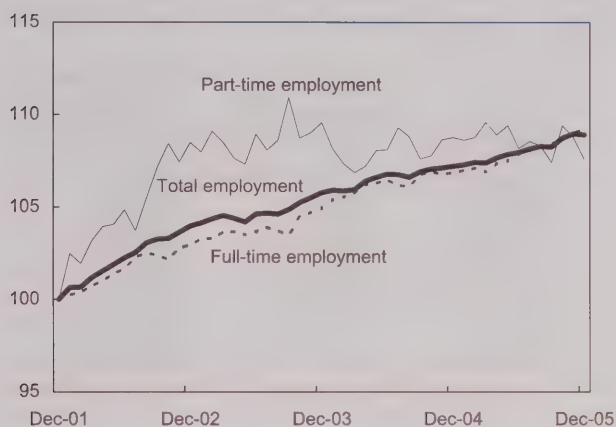


Source: Labour Force Survey, seasonally adjusted

Although the employment rate was up at least marginally for most groups, the participation rate declined for all except those 55 and over.

## Full-time employment improves

December 2001=100



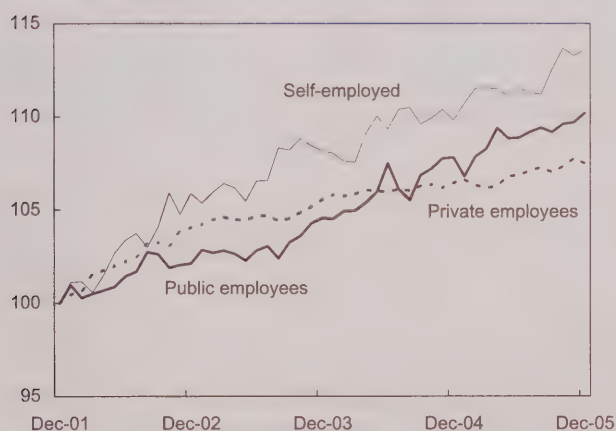
Source: Labour Force Survey, seasonally adjusted

Between December 2004 and December 2005, full-time employment increased by 2.2% while part-time employment fell by 1.1%, resulting in a net job gain of 1.6%.

	Employment	Full-time	Part-time
	'000		
<b>December level</b>			
2001	14,961.5	12,231.9	2,729.6
2004	16,040.0	13,071.3	2,968.7
2005	16,294.7	13,358.3	2,936.4
<b>Absolute change</b>			
2001 to 2005	1,333.2	1,126.4	206.8
2004 to 2005	254.7	287.0	-32.3
	%		
<b>Percentage change</b>			
2001 to 2005	8.9	9.2	7.6
2004 to 2005	1.6	2.2	-1.1

## Strong growth in self-employment and public-sector jobs

December 2001=100



Source: Labour Force Survey, seasonally adjusted

Public-sector jobs (2.2%) grew at more than double the pace of private-sector jobs (1.0%) over the course of 2005. Self-employment experienced even greater gains, with 3.4%.

	Total employment	Employees		Self-employed
		Public	Private	
	'000			
<b>December level</b>				
2001	14,961.5	2,866.6	9,851.6	2,243.3
2004	16,040.0	3,090.5	10,485.9	2,463.5
2005	16,294.7	3,158.7	10,587.9	2,548.0
<b>Absolute change</b>				
2001 to 2005	1,333.2	292.1	736.3	304.7
2004 to 2005	254.7	68.2	102.0	84.5
	%			
<b>Percentage change</b>				
2001 to 2005	8.9	10.2	7.5	13.6
2004 to 2005	1.6	2.2	1.0	3.4



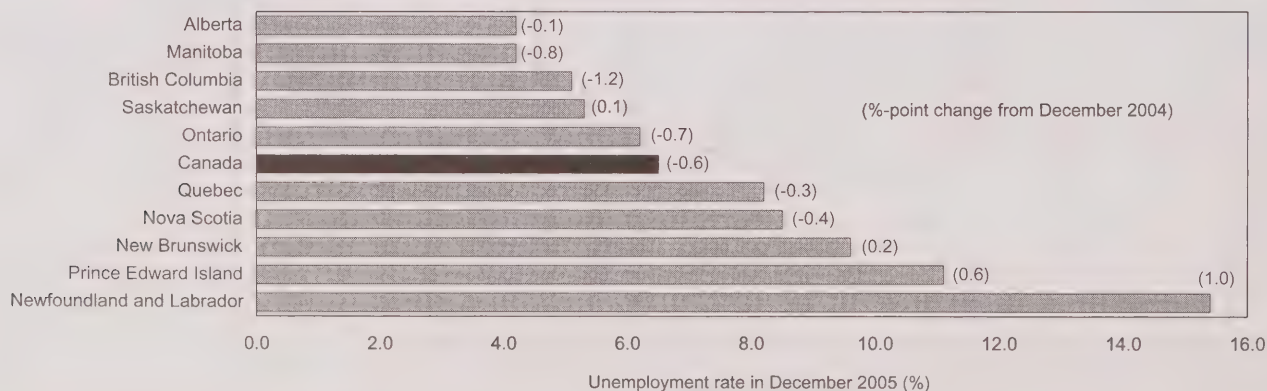
## Jobs added in most provinces

In 2005, employment growth was concentrated in central Canada and the two western-most provinces. New Brunswick and Manitoba also saw a slight gain, but the other four provinces had declines—the largest proportionately being in Newfoundland and Labrador (-2.1%). In terms of number, the most jobs were

added in Ontario (90,000), British Columbia (74,000), Quebec (64,000), and Alberta (34,000).

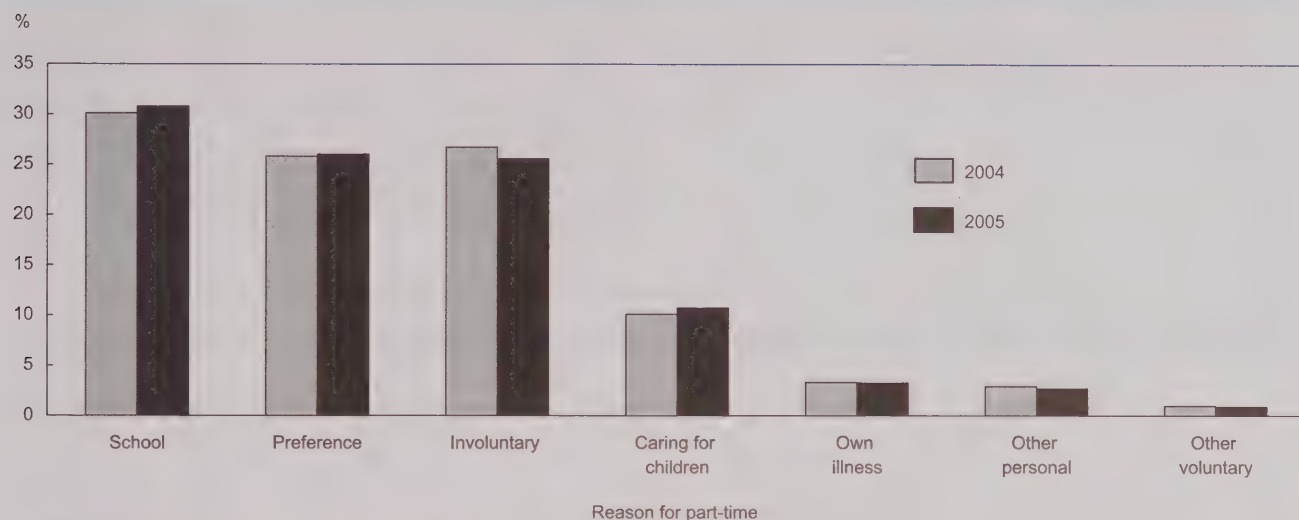
Several provinces experienced declines in their unemployment rate in 2005, the largest in British Columbia (-1.2 percentage points). Newfoundland and Labrador saw its unemployment rate jump by 1 point.

	December level			December-to-December change			
	2001	2004	2005	2001 to 2005	2004 to 2005	2001 to 2005	2004 to 2005
<b>Employed</b>		'000			'000		%
<b>Canada</b>	<b>14,961.5</b>	<b>16,040.0</b>	<b>16,294.7</b>	<b>1,333.2</b>	<b>254.7</b>	<b>8.9</b>	<b>1.6</b>
Newfoundland and Labrador	207.0	215.4	210.9	3.9	-4.5	1.9	-2.1
Prince Edward Island	63.5	68.7	68.6	5.1	-0.1	8.0	-0.1
Nova Scotia	420.3	443.3	441.3	21.0	-2.0	5.0	-0.5
New Brunswick	333.3	352.5	355.3	22.0	2.8	6.6	0.8
Quebec	3,461.7	3,691.4	3,755.0	293.3	63.6	8.5	1.7
Ontario	5,932.9	6,343.1	6,433.4	500.5	90.3	8.4	1.4
Manitoba	560.0	580.5	583.6	23.6	3.1	4.2	0.5
Saskatchewan	452.1	486.4	479.7	27.6	-6.7	6.1	-1.4
Alberta	1,636.6	1,765.7	1,799.8	163.2	34.1	10.0	1.9
British Columbia	1,894.0	2,092.9	2,167.1	273.1	74.2	14.4	3.5
<b>Unemployed</b>							
<b>Canada</b>	<b>1,305.1</b>	<b>1,220.2</b>	<b>1,135.2</b>	<b>-169.9</b>	<b>-85.0</b>	<b>-13.0</b>	<b>-7.0</b>
Newfoundland and Labrador	39.9	36.2	38.5	-1.4	2.3	-3.5	6.4
Prince Edward Island	9.3	8.1	8.6	-0.7	0.5	-7.5	6.2
Nova Scotia	46.4	43.4	41.0	-5.4	-2.4	-11.6	-5.5
New Brunswick	42.1	36.6	37.8	-4.3	1.2	-10.2	3.3
Quebec	363.7	345.0	335.3	-28.4	-9.7	-7.8	-2.8
Ontario	446.8	472.2	426.2	-20.6	-46.0	-4.6	-9.7
Manitoba	27.2	30.6	25.7	-1.5	-4.9	-5.5	-16.0
Saskatchewan	29.8	26.8	26.6	-3.2	-0.2	-10.7	-0.7
Alberta	90.2	80.3	79.7	-10.5	-0.6	-11.6	-0.7
British Columbia	209.7	141.0	115.8	-93.9	-25.2	-44.8	-17.9



Source: Labour Force Survey, seasonally adjusted

## Part-time work



Source: Labour Force Survey, annual averages

In 2005, the percentage of workers who involuntarily worked part time decreased slightly, while part-time work increased among those attending school, those caring for children, those who chose to work part time.

	Total, part- time	Voluntary part-time						Involuntary part-time		
		Own illness	Caring for children	Other personal	School	Prefer- ence	Other	Total	Looked for full-time	Did not look for full-time
2005										
	'000					%				
<b>Total</b>	<b>2,963.5</b>	<b>3.3</b>	<b>10.7</b>	<b>2.7</b>	<b>30.8</b>	<b>26.0</b>	<b>0.9</b>	<b>25.6</b>	<b>7.4</b>	<b>18.2</b>
Youths 15 to 24	1,102.3	0.6	0.9	0.6	74.1	4.9	0.3	18.6	6.4	12.2
Men	456.5	0.6	0.0	0.5	75.9	4.5	0.4	17.9	6.6	11.3
Women	645.8	0.7	1.4	0.6	72.7	5.2	0.2	19.1	6.2	12.9
Adults 25 and over	1,861.2	4.8	16.6	4.0	5.2	38.5	1.2	29.7	8.0	21.7
Men	474.2	6.3	2.2	1.9	8.7	43.7	1.9	35.4	11.1	24.4
Women	1,387.0	4.3	21.5	4.7	4.0	36.8	1.0	27.7	7.0	20.7

Source: Labour Force Survey, annual averages

The bulk of part-time workers continue to be youth and adult women. Almost three-quarters of young part-timers work short hours voluntarily because of school; among adults, about 40% prefer part-time hours.



## Earnings

	Hourly wage in 2005				Change from 2004			
	Both sexes	Men	Women	Ratio	Both sexes	Men	Women	Ratio
		\$				\$		
15 and over	19.09	20.74	17.38	0.84	0.59	0.58	0.60	0.01
15 to 24	10.87	11.38	10.37	0.91	0.38	0.37	0.42	0.01
25 to 54	20.80	22.55	18.99	0.84	0.62	0.56	0.66	0.01
55 and over	20.95	23.34	18.28	0.78	0.65	0.75	0.60	0.00

Source: Labour Force Survey, annual averages

Women working for a wage or salary earned 84 cents for every dollar earned by men in 2005, up marginally from the year before. Only those 55 or over did not share in the increase.

**We welcome your views** on articles and other items that have appeared in *Perspectives*. Additional insights on the data are also welcome, but to be considered for publication, communications should be factual and analytical. We encourage readers to inform us about their current research projects, new publications, data sources, and upcoming events relating to labour and income.

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# Trusteed pension plans

Typically, trusteed pension plans are either defined-benefit or defined-contribution, although a few are a combination of both. A defined-benefit plan stipulates the benefits a beneficiary shall receive. The employer is ultimately responsible to make up any funding liability to meet commitments. Defined-contribution plans specify the employee's contribution (if any) as well as the employer's. Benefits are provided from accumulated contributions plus the return on the investment of these monies.

In 1992, defined-benefit plans accounted for 68% of all trusteed pension plans, defined-contribution plans for 31%, and combination or 'other' plans for the remaining 1%. The proportion of defined-benefit plans rose steadily to 75% in 1998, while defined-contribution plans dropped to 17%. From 1998 to 2002, the proportions stabilized, at about 74% and 17% respectively. Combination and other plans grew significantly, reaching nearly 10% in 2002. But 2004 showed a distinct rise in defined-benefit plans to 77%, the number jumping by a third, from 2,234 in 2002 to 2,929 in 2004. During the same period, the number of defined-contribution plans rose less than 2%, from 521 to 530, while combination and other plans climbed more than 20%, from 290 to 357.

Defined-benefit plans represented over 94% of all trusteed pension plan membership in 1992, defined-contribution plans 5%, and combination and other plans less than 1%. By 2004, the defined-benefit portion had dropped to 87%, while the defined-contribution share

remained at about 5%. However, combination and other had increased significantly to about 8%. Combination plans typically exist to address the pension needs of different groups of employees under a single employer. For example, hourly paid employees may be in a conventional defined-benefit plan, whereas salaried employees may be in a defined-contribution plan.

Defined-benefit plans represented nearly 97% of all trusteed pension fund assets in 1992, with defined-contribution plans holding 3%, and combination and other plans less than 1%. As with membership, the proportion of assets held by defined-benefit plans dropped steadily, reaching 91% by 2004. Defined-contribution plans dropped below 3%, but combination and other plans grew to nearly 7%.

Combination plans may have increased because existing defined-benefit plans have added a defined-contribution component. Both the components may be active, or the defined-benefit part may have been frozen with all new contributions going to the defined-contribution part. Trustees may now be considering such plans as combination plans. Also, new combination plans may have been created with defined-benefit and defined-contribution components.

*For further information, contact Robert Anderson of the Income Statistics Division. He can be reached at (613) 951-4034 or [robert.anderson@statcan.ca](mailto:robert.anderson@statcan.ca).*

	Defined-benefit			Defined-contribution			Combination and other		
	Funds	Members	Assets	Funds	Members	Assets	Funds	Members	Assets
		'000	\$ (million)		'000	\$ (million)		'000	\$ (million)
1992	2,300	3,620	244,489	1,064	187	7,585	33	15	105
1993	2,210	3,672	298,231	926	136	6,523	115	84	7,160
1994	2,302	3,668	296,979	767	139	6,734	155	111	7,768
1996	2,316	3,565	397,533	672	147	9,919	180	117	11,203
1998	2,228	3,378	478,926	514	178	13,270	220	187	19,916
2000	2,354	3,537	553,658	554	196	15,378	285	285	29,125
2002	2,234	3,930	512,223	521	226	17,713	290	303	26,875
2004	2,929	4,012	631,606	530	228	18,062	357	365	46,294
					%				
1992	67.7	94.7	96.8	31.3	4.9	3.0	1.0	0.4	0.2
1993	68.0	94.4	95.6	28.5	3.5	2.1	3.5	2.2	2.3
1994	71.4	93.6	95.3	23.8	3.5	2.2	4.8	2.9	2.5
1996	73.1	93.1	95.0	21.2	3.8	2.4	5.7	3.0	2.6
1998	75.2	90.3	93.5	17.4	4.8	2.6	7.4	5.0	3.9
2000	73.7	88.0	92.6	17.4	4.9	2.6	8.9	7.1	4.8
2002	73.4	88.1	92.0	17.1	5.1	3.2	9.5	6.8	4.9
2004	76.7	87.1	90.7	13.8	4.9	2.5	9.3	7.8	6.6

Source: Trusteed Pension Funds



# In the works

*Some of the topics in upcoming issues*

---

## ■ Returns to adult education

A comparison of the earnings gains of workers who went back to school with those of their counterparts who did not further their education.

## ■ Long-term absence due to illness

An examination of recent trends in the incidence and duration of long-term work absences (two weeks or longer) due to personal or work-related illness or disability.

## ■ Women as primary breadwinners

A look at couples where the wife is the principal earner versus couples where the husband is. Characteristics examined include age, education, occupation, work patterns, earnings, family income and presence of children.

## ■ Financial capability

An analysis of retirement savings patterns over the last two decades.

## ■ Shifts in spending patterns of Canadian and American households

How have spending patterns of Canadian and American households shifted over the last two decades by income, age of reference person and type of household?

## ■ Mandatory RRSP conversions

This study exploits the mandatory conversion of RRSPs into an income stream at age 70 to examine the impact on retirement income and income taxes.

## ■ Financing postsecondary education

A look at the use of the Canada Student Loan Program by students attending a university or college.

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# PERSPECTIVES

ON LABOUR AND INCOME

**SUMMER 2006**

Vol. 18, No. 2

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BACK TO SCHOOL?
- WHO GETS STUDENT  
LOANS?
- CRACKING THE  
RRSP NEST EGG
- ON SICK LEAVE
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ON LABOUR AND INCOME

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## ■ Articles

### 5 Does it pay to go back to school?

*Boris Palameta and Xuelin Zhang*

As rapid technological change drives the growth of a knowledge-based economy and creates the need for new job-related skills, an aging population means that fewer new workers are available to meet these needs. As a result, adults are re-entering the educational system in increasing numbers, even though they are likely to face more challenges than regular students in terms of balancing work, education, and family responsibilities. Going back to school is an investment that is expected to yield returns, but who actually benefits from adult schooling and by how much?

### 12 Who gets student loans?

*Costa Kapsalis*

Every year the Canada Student Loans Program (CSLP) provides approximately \$1.5 billion in loans and \$80 million in grants to students with a demonstrated financial need. Nevertheless, a gap in postsecondary participation remains between children from upper- and lower-income backgrounds. While it is difficult to estimate the extent to which the CSLP has made it possible for low-income students to obtain a postsecondary education, the study looks at how well loans are targeted to low-income youth, the extent to which the loan amount reflects financial need, and the impact of parental income.

### 19 Cracking the RRSP nest egg

*Ted Wannell*

A registered retirement savings plan (RRSP) constitutes a key component of retirement income planning in Canada. RRSPs allow individuals to save pre-tax dollars in a variety of investment instruments where interest, dividends and capital gains accrue tax free until the funds are withdrawn. However, the taxman will eventually receive his due. RRSPs must be converted into an annuity or a registered retirement income fund (RRIF) in the year the taxpayer turns 69, with prescribed minimum withdrawals starting





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the following year. RRSP withdrawals already generate significant tax revenues, estimated at over \$4 billion in 2002. Although mandatory conversion affects mainly middle- and high-income earners, some low-income savers could have their means-tested social benefits reduced by the boost in income.

## 29 On sick leave

*Katherine Marshall*

Some 720,000 work absences of two weeks or longer due to illness or disability were reported in 2003—200,000 of which were work-related. With a median duration of 11 weeks, each of these long-term absences costs roughly \$8,800. Furthermore, absences lasting upwards of four months were generally associated with negative health, stress, career stagnation, and heightened chances of being on leave again the following year.

## 39 Screening job applicants

*Ernest B. Akeyeampong*

Finding the right person for the job is the goal of every hiring decision. In most cases, a personal interview combined with a skill-specific test will be enough for both parties to see if they are compatible. However, for dangerous jobs or where public safety or security is at stake, more stringent requirements need to be met. Medical examinations, security checks, and drugs tests are three screening techniques employers use.

## 45 Unemployment since 1971

*René Morissette and Feng Hou*

Between 1971 and 2005, Canada's labour force became more educated in line with the increased credentials of new entrants, while the aging of the workforce shifted the experience profile upwards. However, this was not reflected in unemployment rates, which were for the most part slightly higher in 2005 than in 1971. What factors are at play? The article looks at specific age-education combinations to yield a more nuanced long-term perspective on current labour market conditions.

# Highlights

*In this issue*

## ■ Does it pay to go back to school? ... p. 5

- Workers who return to school as adult students tend to do so at the non-university postsecondary level. Close to 90% of postsecondary certificates obtained by adult students were from institutions such as community colleges, and trade or vocational schools.
- Workers who participated in adult education and obtained a postsecondary certificate generally registered higher earnings gains than their non-participating counterparts, even when factors such as initial wage, occupation, and firm size were taken into account.
- Although younger, better-educated workers had higher participation rates, older, less-educated participants were just as likely to reap the benefits of certification. However, gains for older participants were restricted to those who stayed with the same employer, while younger participants benefited more if they switched employers.

## ■ Who gets student loans? ... p. 12

- Over half (52%) of full-time postsecondary students aged 18 to 24 with parental income below \$40,000 received a loan from the Canada Student Loans Program (CSLP) in 2000, compared with 14% of students with parental income of \$80,000 or more.
- The average loan amount declines as parental income increases. In 2000, about two-thirds of the value of CSLP loans went to students with parental income below \$60,000—73% in the case of dependent students and 51% in the case of independent students.
- Female students had a higher CSLP take-up rate than their male counterparts (34% versus 29%). But they also had a higher full-time postsecondary participation rate (38% versus 30%).

■ Students from families who came to Canada since 1980 had a much higher CSLP take-up rate than others (45% versus 31%). The difference is partly attributable to lower parental income: 58% of these immigrant students had parental income below \$40,000, compared with 29% of other students.

## ■ Cracking the RRSP nest egg ... p. 19

- Mandatory conversion of RRSPs substantially boosts the income of 70 year-olds—an average of about \$1,600 or 6.6% of taxable income in 2002. At the same time, some other forms of income are declining, so the net increase in taxable income is much less—\$800 in 2002.
- The income effect of mandatory conversion is increasing over time, indicating that younger cohorts have greater RRSP assets when they reach age 69 than those who preceded them. More of the converted assets are now being managed in RRIFs as opposed to annuities.
- High-income earners are much more likely to have a substantial RRSP-related boost in income than those earning less. More than half of the top income quintile had an increase of over \$2,400 compared with 1 in 20 of the bottom quintile. Hence, much of the income generated by mandatory conversion will be taxed at relatively high marginal rates.
- Very few seniors rely on RRSPs for a significant proportion of their income prior to age 70. Just 2.4% made annual RRSP withdrawals that accounted for over one-quarter of their income. For this group, taxable income actually declined at age 70.
- Seniors who continue to earn most of their income from employment at age 69 tend to be high-income professionals. For them, mandatory conversion results in an average RRSP-generated



boost in income of more than \$7,000, softening to \$5,100 after netting out declines from other sources.

## ■ On sick leave ... p. 29

- In 2003, long-term absences from work (two weeks or more) due to illness or disability averaged 11 weeks and cost \$8,800 each.
- While the rate for long-term absences for personal illness or disability was relatively stable—3.9% in 1993 and 3.7% in 2003, the rate for absences that were work-related fell steadily—from 1.8% to 1.4%.
- Prior health issues, age, job permanency, and having a unionized job with extended medical or disability coverage, all significantly increased the likelihood of an extended absence.
- Absences lasting upwards of four months had consequences, including negative health, stress, career stagnation, and heightened chances of being on leave again the next year.

## ■ Screening job applicants ... p. 39

- Personal interviews and job-related skill or knowledge tests are routine in many hirings. But medical examinations, security checks and, lately, drug tests are often required in specific situations.
- While medical examinations have become less prevalent, security checks have risen steadily. Approximately 25% of pre-1980 new hires underwent a medical examination, while 5% were given a security check. The rates were 11% and 12% respectively in 2000 and 2001.
- Medical examinations continue to feature prominently for the more physically demanding jobs. These as well as security checks are especially common today for professional jobs (notably, teachers and health workers), law enforcement officers, and information technology personnel.
- Drug tests, rarely used for screening before 1990, are now required for roughly 1 in 50 employees hired. The rate is much higher for some manufacturing positions.

## ■ Unemployment since 1971 ... p. 45

- For men aged 25 to 34 with less than high school education, the unemployment rate increased by fully 7 percentage points between 1971 and 2005. For those with a high school diploma, the rise was 3 points. At the other end of the spectrum, university graduates saw a rise of only 1 point.
- Among women aged 25 to 34 with no high school diploma, the unemployment rate grew 6 percentage points between 1971 and 2005. For those with more education, rates rose by roughly 2 points.
- Because the unemployment increases occurred while the Canadian labour force was becoming more educated and experienced, the overall unemployment rate did not trend upwards over the last three decades. However, had these changes not taken place, the unemployment rates of both men and women would have risen, all else equal, between 1971 and 2005.

## ■ What's new? ... p. 51

- **From Statistics Canada**
  - Science and engineering employment in Canada and the United States
  - Students in the labour market
  - Electronic commerce and technology
  - The year in review: The revenge of the old economy
  - Productivity spillovers from foreign-controlled suppliers in manufacturing
  - Low income
  - The dynamics of overqualification
  - Income of Canadians
  - Work hours instability
  - New frontiers of research on retirement
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- **From other organizations**
  - Employee screening: theory and evidence
  - Socio-economic influences on the health of older Canadians
  - Distance to school and university participation
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  - Wage inequality and overeducation
  - Directed search on the job and the wage ladder
  - Equilibrium search unemployment with explicit spatial frictions
  - Impact of the oil price on expectations and wages

# Does it pay to go back to school?

Boris Palameta and Xuelin Zhang

**N**umerous studies have documented the benefits of staying in school. But what about going back to school? The notion that formal education is something one completes before entering the labour market has become increasingly outdated. While rapid technological change drives the growth of a knowledge-based economy and creates the need for new job-related skills, an aging population means that fewer new workers are available. As a result, more adults are re-entering the educational system. The number of Canadians aged 25 to 64 who were full-time students more than tripled from 1976 to 1996 (Gower 1997). Similar trends are reported in other countries. For example, whereas less than 10% of registered students in the U.S. were 35 or older in 1970, this percentage had increased to more than 19% by 2001 (Armour 2003).

Some adult students are already highly educated, but may nevertheless feel the need to upgrade their knowledge and skills. Others may have entered the labour market with less education in low-skilled jobs, and may now want to improve their prospects. In either case, adult students are likely to face more challenges than other students in terms of balancing work, education, and family responsibilities. For example, adult students are likely to be cutting back work hours and incurring greater costs in foregone earnings. On the other hand, going to school without cutting back work hours may result in family responsibilities being compromised.

These costs may be especially prohibitive for older workers, who have less time to make up foregone earnings, and less-educated workers, who are less likely to have their educational activities supported by

employers. Indeed, these groups are less likely to participate in adult education than their younger, better-educated counterparts (Peters 2004).

Going back to school is an investment that is expected to yield returns, yet the data on returns to adult education are sparse, particularly in Canada.<sup>1</sup> Who benefits and by how much? Are the groups most likely to participate—the younger and the more-educated—also most likely to benefit? Using the Survey of Labour and Income Dynamics (see *Data source and definitions*), this study looks at hourly and annual earnings before and after adult education, and compares the earnings gains of those who returned to school with those who did not.

**Table 1 Adult education participation rates**

	Overall	No certificate	Post-secondary certificate
		%	
<b>Men</b>	<b>13.7</b>	<b>5.3</b>	<b>8.4</b>
17 to 34	19.1	7.8	11.3
35 to 59	9.9	3.5	6.4
Less than high school	8.2	4.6	3.6
High school graduate	13.3	4.5	8.9
College	16.3	5.9	10.4
Bachelor's or above	14.0	5.6	8.4
<b>Women</b>	<b>14.7</b>	<b>6.8</b>	<b>7.9</b>
17 to 34	19.4	9.0	10.4
35 to 59	12.0	5.6	6.4
Less than high school	10.3	6.3	4.0
High school graduate	12.6	4.9	7.7
College	16.9	7.3	9.7
Bachelor's or above	15.8	9.8	6.0

Source: Survey of Labour and Income Dynamics, 1993-2001

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## Most adult students are young and have at least a high-school diploma

Over the study period, 14% of men and 15% of women were adult students. The majority of them obtained a postsecondary certificate. As in previous studies (Peters 2004), age and initial level of education were linked to participation in adult education. Young workers (17 to 34) had much higher participation and certification rates than their older counterparts (35 to 59); workers with less than high school education had the lowest rates. However, no simple relationship was seen between initial level of education and participation in adult schooling. For example, the

certification rates of high school graduates and holders of university degrees were practically the same (Table 1).<sup>5</sup>

## Most adult education takes place in community colleges and other non-university institutions

Adult students most frequently attended non-university postsecondary institutions such as community colleges, and trade or vocational schools. The overwhelming majority of postsecondary certificates obtained—close to 90%—were at the non-university level (Table 2).

### Data source and definitions

The **Survey of Labour and Income Dynamics (SLID)** covers roughly 97% of the Canadian population, excluding those who live in the territories, in institutions, on Indian reserves or on military bases. Each panel of respondents, comprising approximately 15,000 households and 30,000 adults, is surveyed twice a year—once on labour market experiences, educational activity and family relationships and once on income—for a period of six consecutive years.<sup>2</sup> A new six-year panel is introduced every three years, so two panels always overlap. Presently, two complete panels are available (1993-1998 and 1996-2001), from which the sample for this study is drawn.

Each respondent's level of education is established during the first interview, including all postsecondary certificates the respondent has obtained. Subsequent educational activity is reported each year, including school attendance and new postsecondary certificates received. Changes in earnings over the six years can therefore be compared for those who attended school in the intervening years and those who did not. The study is limited in that information on job-related training activities is available only from 2002 on, so training activities are covered only if they were part of a credit program in a formal educational institution.

**Adult students** are defined as persons who had previously left school and worked for at least a year before going back to school. To facilitate the analysis, a sample was selected according to the following criteria:

1. Only persons aged 17 to 59 in the first year of observation who responded for all six years were included. In addition, those between 50 and 59 in the first year who received pension benefits at any time during the six-year period were excluded.
2. Those who were full-time or part-time students or who received a postsecondary certificate in the first or last year were excluded. Excluding those who attended school in year one ensures the selection of workers who returned to school, not continuing students. Because school attendance may affect earnings, excluding those who were students in year six ensures a more consistent assessment of gains in earnings over the six years.

3. Because the decision to work part time is likely to influence earnings, only those who wanted to work full time in years one and six—that is, those who worked full time for at least part of the year, or whose main job was either full-time or involuntary part-time—were included.<sup>3</sup> Voluntary part-time workers may have turned down a better-paying full-time job because they preferred to work part time, and were thus excluded from the analysis.
4. Because the focus is on the impact of adult education on income from paid employment, people with any self-employment earnings in any year were excluded.
5. Finally, those with an unknown initial level of education were also excluded.

The final sample consisted of 10,999 individuals—5,326 from panel one and 5,673 from panel two.

**Hourly earnings** are from the main job—the one with the most scheduled hours—at the end of the reference year, or at the end of the job if it ended during the year. Tips, bonuses, and commissions are included. For respondents who reported their wage or salary as an hourly amount, the value is taken directly. For those who reported on some other basis, the amount is converted to an implicit hourly rate, based on number of weeks or months worked and number of hours per week usually worked.

**Annual earnings** refer to total wages and salaries from all paid jobs during the reference year.

Changes in hourly and annual earnings over the six years were compared for three groups:

- those who did not attend school in the six-year period (non-participants)
- those who attended at some point between years two and five but did not receive a postsecondary certificate (adult students, no certificate)<sup>4</sup>
- those who received a postsecondary certificate between years two and five (adult students, certificate)

**Table 2 Educational institutions attended by adult students**

	No certificate <sup>1</sup>	Post-secondary certificate <sup>2</sup>
	%	
<b>High school</b>	<b>19.4</b>	...
<b>Non-university post-secondary institutions</b>	<b>58.5</b>	<b>88.3</b>
Community college/applied arts and technology	27.9	36.5
Trade or vocational school	13.1	31.0
Business or commercial school	5.7	16.7
CEGEP	4.8	4.1
Multiple	7.0	...
<b>University</b>	<b>22.2</b>	<b>11.7</b>

1 Highest level of schooling obtained.

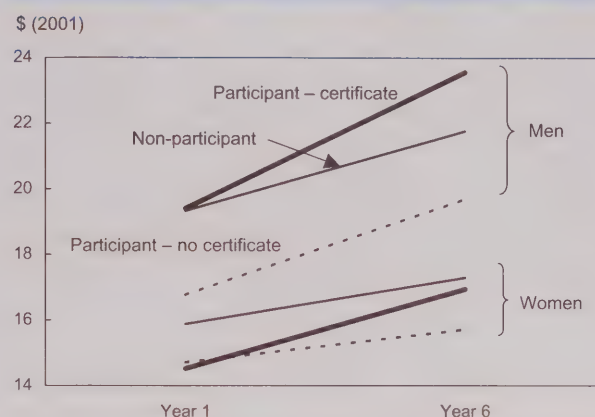
2 For persons who obtained more than one postsecondary certificate, only their most recent certificate is counted.

Source: Survey of Labour and Income Dynamics, 1993-2001

### Adult education pays, but only for those who get a postsecondary certificate

Earnings growth over the six-year period of observation was assessed in terms of both hourly and annual earnings. Those who obtained a postsecondary certificate at some point in the second to fifth years realized the largest gains. For example, hourly and annual earnings of women who obtained a certificate grew at roughly double the rate of women who did not participate in adult education. Women who went back to school without obtaining a certificate, on the other hand, had smaller gains than women who did not participate (Chart).

Of course, these results may stem from factors other than adult education. For instance, young workers' earnings typically grow at faster rates than those of their older counterparts, and young workers are also more likely to go back to school and obtain a certificate. So the above results could reflect age differences between the groups being compared rather than differences in adult education. In order to isolate the association between earnings gains and adult education, other variables associated with earnings gains need to be taken into account. A common way to do this is with a regression model (see *Regression model*).

**Chart Workers obtaining a postsecondary certificate had the greatest gains in hourly earnings.**

Source: Survey of Labour and Income Dynamics, 1993-2001

### Getting a postsecondary certificate pays, regardless of initial level of education

In non-technical terms, the regression estimates the average returns to adult education—that is, the difference between earnings gains registered by participants and non-participants, once factors such as age, initial level of education, firm size, union status, province, and occupation have been taken into account.

Regression models were estimated for younger (17 to 34) and older (35 to 59) men and women, as well as men and women with lower (high school and below) and higher (at least some college) initial levels of education.<sup>7</sup>

The results reinforce the previous observation that the returns to adult schooling for those who do not obtain a postsecondary certificate are not significantly different from 0. In fact, they can be negative for older men and women, at least in the short period examined (Table 3). Those who obtain a certificate, on the other hand, enjoy significant gains.<sup>8</sup>

All groups of men who obtained a postsecondary certificate—young and older, more and less educated—had a significantly higher growth in their hourly earnings than those who did not participate in adult schooling. The returns ranged from 6% for men



## Regression model

To estimate the returns to adult schooling, an equation similar to the one commonly used in studies of earnings growth (such as Podgursky and Swaim 1987) was specified,

$$\ln(W_{6i}) = \alpha + \delta \ln(W_{1i}) + \beta_1 C_i + \beta_2 NC_i + \theta X_{1i} + \varepsilon_i$$

where  $\ln W_1$  and  $\ln W_6$  represent the natural logarithm of annual or hourly earnings in the first and last years of observation, respectively.  $C$  and  $NC$  represent adult students who did and did not obtain a postsecondary certificate, and  $X$  is a set of other variables reflecting characteristics in year 1: age, age squared, level of education, marital status, union status, firm size, full- or part-time employment status, industry, occupation, province, urban or rural residency, sex, and panel.

The equation can be reformulated as follows,

$$\ln(W_{6i}/W_{1i}) = \alpha + (\delta - 1) \ln(W_{1i}) + \beta_1 C_i + \beta_2 NC_i + \theta X_{1i} + \varepsilon_i$$

whose initial level of education was college or higher to 10% for those with high school or less.<sup>9</sup> In addition, most groups of men (with the exception of those aged 35 to 59) received substantial gains in their annual earnings.

**Table 3 Earnings returns to adult education for different groups**

	Men		Women	
	Hourly	Annual	Hourly	Annual
%				
<b>17 to 34</b>				
No certificate	n.s.	n.s.	n.s.	n.s.
Certificate	6.9**	8.9**	10.6**	14.7*
<b>35 to 59</b>				
No certificate	-7.0*	-27.2**	n.s.	-40.2**
Certificate	7.6**	n.s.	n.s.	n.s.
<b>High school or less</b>				
No certificate	n.s.	n.s.	n.s.	n.s.
Certificate	10.1**	8.9*	9.7**	n.s.
<b>College or more</b>				
No certificate	n.s.	n.s.	n.s.	n.s.
Certificate	5.8**	6.0*	n.s.	n.s.

\* significant at  $P < .10$  (estimates are less precise than \*\*, should be interpreted with caution).

\*\* significant at  $P < .05$ .

n.s. not significantly different from 0.

Source: Survey of Labour and Income Dynamics, 1993-2001

to estimate the growth in earnings from year one to year six, where  $\beta_1$  and  $\beta_2$  are approximately equal to the percentage earnings growth<sup>6</sup> associated with the two types of adult education, over and above the growth registered by non-participants.

In other words,  $\beta_1$  and  $\beta_2$  represent the *average returns* to the two types of adult education (certificate and no certificate).

A nice feature of this model is that it controls for initial wages, which allows some control for unobserved characteristics such as motivation and ability that might influence both participation in adult education and earnings growth.

In order to take into consideration the complex survey design of SLID, the regression analysis was carried out using bootstrap weights and SUDAAN version 9.0.

Benefits to women, on the other hand, seem relatively limited. Only women aged 17 to 34 enjoyed high returns in both hourly and annual earnings—11% and 15% respectively—upon obtaining a postsecondary certificate. In addition, women with high school or less who obtained a postsecondary certificate received significant returns in hourly, but not annual, earnings. Perhaps obtaining a postsecondary certificate allows previously less-educated women to reduce their hours worked at several different jobs and focus on one better-paying job.

For both men and women, those with a low initial level of education profited at least as much or more from getting a postsecondary certificate as those with higher levels of education.

## Different pathways for younger and older adult students

Adult students who get a postsecondary certificate may benefit in two different ways: They could receive a raise or promotion within their firm, or alternatively they might get a better-paying job with another employer. These scenarios were investigated using separate models for job-stayers (same main job all six years<sup>10</sup>) and job-switchers (main job changed at least once).

Returns were substantial for men who got a postsecondary certificate while keeping the same job, regardless of age and education. In fact, hourly

**Table 4 Earnings returns to adult education for those who kept the same job**

	Men		Women	
	Hourly	Annual	Hourly	Annual
	%			
<b>17 to 34</b>				
No certificate	n.s.	n.s.	n.s.	n.s.
Certificate	6.3*	9.4*	n.s.	n.s.
<b>35 to 59</b>				
No certificate	n.s.	n.s.	n.s.	n.s.
Certificate	13.3**	8.6**	7.3*	9.5**
<b>High school or less</b>				
No certificate	n.s.	n.s.	n.s.	n.s.
Certificate	15.3*	12.7*	n.s.	n.s.
<b>College or more</b>				
No certificate	n.s.	n.s.	n.s.	n.s.
Certificate	7.6**	8.4**	n.s.	7.7**

\* significant at  $P < .10$  (estimates are less precise than \*\*, should be interpreted with caution).

\*\* significant at  $P < .05$ .

n.s. not significantly different from 0.

Source: Survey of Labour and Income Dynamics, 1993-2001

earnings returns were higher for older men and men with high school or less (13% and 15% respectively) than for their younger and better-educated counterparts (6% and 8% respectively). For women who kept the same job, gains associated with certification were confined to those aged 35 to 59 and those whose initial level of education was college or higher (Table 4).

Among job-switchers, obtaining a postsecondary certificate resulted in significant wage returns only for young men and women, and women with high school or less (Table 5). Older workers did not appear to benefit. In fact, older certificate-obtaining women who switched jobs registered some wage loss compared with their non-participant counterparts. Older job-switchers who went back to school without obtaining a certificate also registered substantial losses—women in annual earnings and men in both hourly and annual earnings (see *Older job switchers*).

Dividing the sample into job-stayers and switchers reveals the different ways that younger and older adult students benefit from certification. Older students used their certificate to progress within their firm while younger students moved to a better-paying job.

The different outcomes for younger and older workers may reflect changes in general human capital and firm-specific human capital. General human capital refers to knowledge and skills acquired through formal education, which can be applied to any job. Firm-specific human capital is more limited.

Because younger workers generally have shorter tenure at a given firm, their firm-specific human capital tends to be lower. Therefore, younger workers who switch jobs can benefit from certification because they have increased their general human capital while incurring little loss of firm-specific capital. Older workers who switch jobs, on the other hand, may be less likely to reap immediate benefits from certification because their increase in general human capital may be outweighed by their loss in firm-specific capital.

## Summary

The benefits of adult education are widespread, but only for those who get a postsecondary certificate. Those who completed a postsecondary certificate generally registered higher gains in earnings than those who

**Table 5 Earnings returns to adult education for those who switched jobs**

	Men		Women	
	Hourly	Annual	Hourly	Annual
	%			
<b>17 to 34</b>				
No certificate	n.s.	n.s.	n.s.	n.s.
Certificate	8.4*	n.s.	15.0**	n.s.
<b>35 to 59</b>				
No certificate	-13.9*	-50.0**	n.s.	-49.3*
Certificate	n.s.	n.s.	-11.4**	n.s.
<b>High school or less</b>				
No certificate	n.s.	n.s.	n.s.	n.s.
Certificate	n.s.	n.s.	10.9*	n.s.
<b>College or more</b>				
No certificate	n.s.	n.s.	n.s.	n.s.
Certificate	n.s.	n.s.	n.s.	n.s.

\* significant at  $P < .10$  (estimates are less precise than \*\*, should be interpreted with caution).

\*\* significant at  $P < .05$ .

n.s. not significantly different from 0.

Source: Survey of Labour and Income Dynamics, 1993-2001



### Older job switchers

Why did older workers who returned to school, especially those not earning a postsecondary certificate, often experience such marked earnings losses relative to other older job switchers? One reason may be that older adult students who did not receive certificates were much more likely to experience long layoffs. Almost a quarter of the older men and more than half of the older women who went back to school but did not receive a certificate experienced an unemployment spell lasting at least a year, compared with only 3% and 7% respectively of older men and women who did not participate in adult education.

Job switchers, age 35 to 59	At least one spell of unemployment lasting 1 year or more	
	Men	Women
	%	
Non-participants	3.3	6.6
Participants, no certificate	23.0	52.0
Participants, certificate	7.0	18.0

Those who experienced long layoffs were more likely to go back to school, but a smaller proportion of them completed a postsecondary certificate. For example, 51% of older women who were unemployed for at least a year went back to school, but just over a quarter got a certificate. In contrast, among older women who were never unemployed for a year or more, only 12% went back to school, but almost two-thirds obtained a certificate. A similar trend is found for men. The long-term unemployed may feel a greater need for adult education, but have fewer resources to complete it.

Job switchers, age 35 to 59	Non- participants	Participated in adult education	
		No certificate	Certificate
<b>Men</b>		%	
Unemployed 1 year +	63.3	24.5	12.3
Other	88.2	3.9	7.9
<b>Women</b>			
Unemployed 1 year +	49.3	36.9	13.8
Other	87.8	4.3	7.9

did not participate, even when factors such as firm size, occupation, industry, union status, and province were taken into account.

Although older workers (35 to 59) and workers with high school or less participated in adult education less often than their younger, more-educated counterparts,

those who did participate often benefited just as much or more. However, gains for older workers were restricted to those who stayed with the same employer, while gains for young workers were larger for those who switched employers.

Older men and women who stayed with the same employer while obtaining a postsecondary certificate registered gains in hourly earnings that were 13% and 7% higher respectively than their counterparts who did not go back to school. Their gains in annual earnings were 9% and 10% higher respectively.

However, the earnings of older men and women who obtained a postsecondary certificate and switched employers did not increase at a higher rate than those of their non-participating counterparts.

For young workers, especially young women, obtaining a postsecondary certificate was associated more with getting a new, better-paying job than with getting higher pay at their old job. Among young women who switched jobs, those who obtained a postsecondary certificate registered average hourly earnings gains 15% higher than those who did not participate in adult education.

### Perspectives

#### ■ Notes

1 Statistics Canada's Adult Education and Training Survey (AETS) generates a number of studies on adult education and training in Canada. However, being cross-sectional and designed primarily to measure the incidence and variation in types of adult education and training, the AETS is not well suited to examining the earnings impact of adult schooling (Hui and Smith 2003).

2 As of 2004, the labour and income interviews were combined so that each respondent is surveyed once a year.

3 If a person has more than one job, the main job is defined as the one with the most scheduled hours in the year. The main job is considered to be involuntary part-time if the reason given for being part-time is "could only find part-time work."

4 Persons who received a high-school diploma are included in this group because they were too few to warrant a separate group. Also, a high-school diploma is unlikely to have the earnings impact of a postsecondary certificate.

5 Other factors associated with the decision to become an adult student are detailed in Zhang and Palameta (2006).

6 The exact percentage change in earnings is given by  $e^{\beta} - 1$ , but  $\beta$  is a good approximation when it has a relatively small value.

7 Insufficient sample sizes precluded non-overlapping regression models—for example, younger men with lower education and younger men with higher education.

8 The certificate per se may not be associated with greater gains in earnings, but rather time spent in school. People who get certificates may spend a longer time in school and thus accumulate more human capital, which might have translated to higher returns even if they had not obtained a certificate. On the other hand, a certificate may act as a signal to employers, simplifying credential recognition and leading to preferential hiring and promotion. Unfortunately, it is difficult to distinguish between these two explanations because detailed information on time spent in school is not available from SLID prior to 2002.

9 Because SLID did not have information on on-the-job training prior to 2002, some of the people classified as non-participants may actually have undergone such training. Thus the returns to adult education may be higher than those estimated here.

10 Only job-stayers who were never laid off are included in the sub-sample. Just over a hundred job-stayers whose employment in their main job was interrupted by a period of layoff or whose layoff history was uncertain were omitted from the analysis.

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**We welcome your views** on articles and other items that have appeared in *Perspectives*. Additional insights on the data are also welcome, but to be considered for publication, communications should be factual and analytical. We encourage readers to inform us about their current research projects, new publications, data sources, and upcoming events relating to labour and income.

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# Who gets student loans?

Costa Kapsalis

Canada places a high degree of importance on postsecondary education. Every year the Canada Student Loans Program (CSLP) provides approximately \$1.5 billion in loans and \$80 million in grants to students with a demonstrated financial need. However, rising tuition fees and increased student debt loads in recent years have raised concerns about the affordability of a postsecondary education. A recent report concluded that “Canada has a problem when it comes to ensuring equal access to the knowledge economy for all its citizens. Despite years of attempting to change the situation, a serious gap in postsecondary participation remains between children from upper- and lower-income backgrounds.” (Junor and Usher 2004).

This study looks at the role of the CSLP. While it is difficult to estimate the extent to which the CSLP has made it possible for low-income students to obtain a postsecondary education, the study addresses certain questions: How well are student loans targeted to low-income youth? To what extent does the amount of the loan reflect the level of financial need? What are the consequences of taking parental income into account for students considered dependent on their parents?

The study uses a database created by linking the Statistics Canada Longitudinal Administrative Database (LAD) to CSLP administrative records (see *Data sources and definitions*). The analysis concentrates on persons aged 18 to 24. Quebec, the Northwest Territories, and Nunavut do not participate in the CSLP and were therefore excluded. Yukon was also excluded because of sample size limitations.

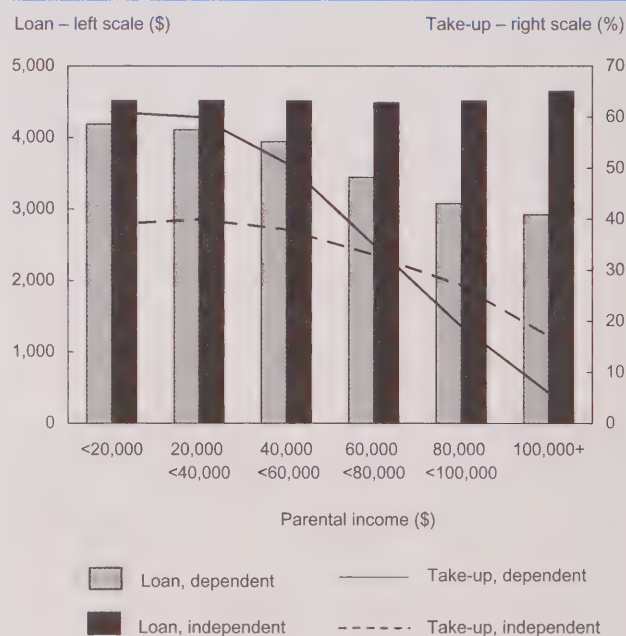
## Student loans targeted to low-income families

The CSLP is intended to help students from lower- and middle-income families meet the costs of postsecondary education. The program distinguishes

between ‘dependent’ and ‘independent’ students. Married individuals, single parents, those who have been employed in the last 24 months, and those who left high school more than four years ago are considered independent; the rest are considered dependent.

In the case of dependent students, parental income is taken into account in assessing financial need. It is therefore not surprising that their CSLP take-up rate declines rapidly at higher parental incomes—from 61% in 2000 for those with parental income below \$20,000 to 6% for those with parental income of \$100,000 and over (Chart A). Even among

**Chart A** CSLP take-up declines as parental income increases.



Sources: Longitudinal Administrative Database, 2000;  
Canada Student Loans Program, 1999-2000

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independent students, however, the take-up rate declines as parental income increases, although less precipitously.

The average loan amount also declines for dependent students as parental income goes up; for independent students, it remains virtually unchanged. In 2000, about two-thirds of loan amounts went to students with parental income below \$60,000—73% in the case of dependent students and 51% in the case of independent students (Table 1).

### Youth from low-income families still less likely to enrol in full-time postsecondary education

Despite the targeting of student loans to those from low-income families, full-time postsecondary enrolment rates for this group remain well below those of high-income families (Chart B). Among dependent youth, the enrolment rate for the top family income bracket in 2000 was almost twice as high as the bottom bracket (51% versus 29%). The gap was even wider in the case of independent youth (46% versus 17%).

### Data sources and definitions

The LAD/CSLP database was created by linking the Statistics Canada **Longitudinal Administrative Database** (LAD) with the **Canada Student Loans Program** (CSLP) database. The LAD consists of the income tax records of approximately 20% of taxfilers. The CSLP database consists of the administrative records of all borrowers. The sample used includes all taxpayers, regardless of whether they have a CSLP loan.

**Full-time postsecondary students** receive a full-time educational deduction. Individuals were classified as full-time students in 2000 if they had a full-time deduction that year. It is not possible, however, to distinguish whether they attended university, college, or a private institution.

**CSLP borrowers** received funds in a loan year (August to July). To be consistent with LAD, this was converted to two calendar years. For example, an individual receiving a loan in 1999-2000 appears as a borrower in 1999 and 2000.

For youths who lived with their parents in 2000, **parental income** refers to 2000. For others, it refers to the most recent year in which they were classified as children. Parental income from previous years was converted to 2000 dollars using the consumer price index. For 14% of full-time students and 28% of other youths, it was not possible to identify parental income. The weights were adjusted to account for the youth with missing parental income.

**Table 1 Postsecondary enrolment and CSLP take-up by dependent status**

Parental income	Youths 18-24	Enrolled full- time	Borrowers	
			Total	Average loan
	'000	%	%	\$
<b>All youth</b>	<b>2,034.9</b>	<b>33.4</b>	<b>32.0</b>	<b>4,073</b>
<b>Dependent</b>	<b>1,047.9</b>	<b>38.9</b>	<b>33.6</b>	<b>3,817</b>
< \$20,000	116.3	28.6	60.6	4,186
\$20,000 < \$40,000	193.1	32.6	59.5	4,108
\$40,000 < \$60,000	199.1	36.1	50.7	3,943
\$60,000 < \$80,000	188.7	38.5	35.2	3,442
\$80,000 < \$100,000	137.8	42.2	18.8	3,077
\$100,000 and over	212.8	50.9	5.5	2,921
<b>Independent</b>	<b>987.0</b>	<b>27.7</b>	<b>29.6</b>	<b>4,531</b>
< \$20,000	135.1	16.8	39.4	4,516
\$20,000 < \$40,000	196.6	19.6	40.0	4,518
\$40,000 < \$60,000	189.1	23.4	37.7	4,514
\$60,000 < \$80,000	173.2	27.6	32.6	4,490
\$80,000 < \$100,000	118.6	33.7	26.8	4,513
\$100,000 and over	174.3	45.8	17.0	4,649

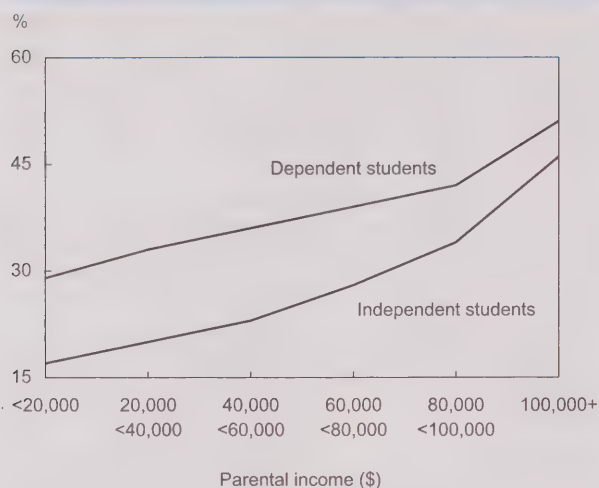
Sources: Longitudinal Administrative Database, 2000;  
Canada Student Loans Program, 1999-2000

Of course, the entire difference in enrolment rates cannot be attributed to family income. Parental education is at least as important (Drolet 2005; Lambert et al. 2004). Additional estimates based on the 2001 Census confirm that full-time enrolments are sensitive to parental income, but even more to parental education. Moreover, parental income has a stronger effect on university enrolment than on college enrolment, and virtually no effect on part-time enrolment (see *Postsecondary enrolment by parental education*).<sup>1</sup> Nevertheless, parental income is important. And, although equality in postsecondary education participation cannot be achieved simply by financial means, student loans and grants remain the main public policy instrument.

Independent youths have lower enrolment rates than dependent youths, primarily because the former tend to be older and postsecondary enrolment declines with age. However, the enrolment rates of the independent group increase more sharply with parental income. It would seem that higher-income families are more likely to support their children's education for a longer time, and that the exclusion of parental income in assessing a student's financial need makes it easier for those from high-income families to become eligible for student loans.



**Chart B Postsecondary enrolment rates increase with parental income.**



Sources: Longitudinal Administrative Database, 2000;  
Canada Student Loans Program, 1999-2000

### Distance is an important barrier to postsecondary enrolment

Financial considerations are often compounded by other factors. One important concern is distance from college or university (Frenette 2003). At the bottom parental income bracket, young people living within

commuting distance (70km) of a university were more than twice as likely as those who lived farther away to attend postsecondary education (Chart C).

Living farther away is particularly significant when combined with low parental income. Among young people who did not live near a university or college, those in the top parental income bracket were almost four times as likely to enrol as those in the bottom bracket (41% versus 11%).

However, although distance can be an important barrier for some, it has a limited effect on overall enrolment rates. The reason is that most young people (81%) live within commuting distance of a university. (Virtually all those living near a university also live near a college.) An additional 15% are within commuting distance of a college only. This leaves just 5% living farther away (Table 2).

### CSLP take-up rate is greatest for those living near a college only

The CSLP take-up rate is 11 percentage points higher for those who live near a college only (41%) than for those who live near a university (30%) (Table 2). The take-up rate for those living beyond commuting distance of either type of institution is 38%. So CSLP take-up does seem to be somewhat sensitive to distance issues, particularly as concerns the proximity to a university. These proximity effects are strongest among low-income students, who are most likely to make use of the CSLP.

### About the CSLP

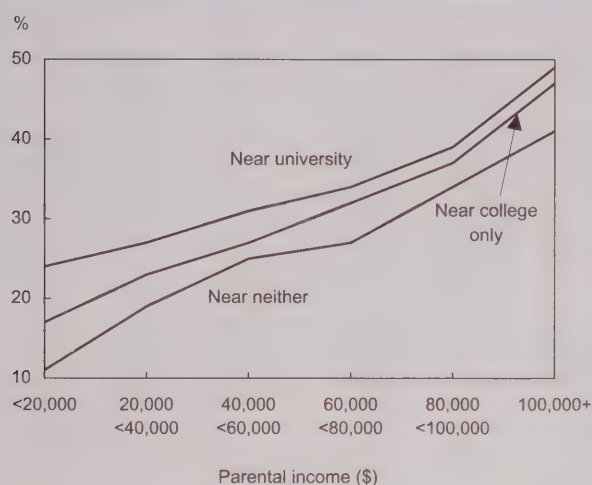
The Canada Student Loans Program (CSLP) is jointly administered by the federal government, nine participating provinces, and Yukon. Quebec, the Northwest Territories and Nunavut receive other payments from the federal government to compensate them for providing comparable assistance through their own student assistance programs. Most loans go to full-time students, less than 1% to part-time students.

The principal objective of the program is to help students from lower- and middle-income families meet the costs of postsecondary education. The level of assistance is based on financial need. This takes into account educational costs (tuition fees, books and supplies, and basic living expenses) and available resources (expected student and family income, if applicable). In 2000, the ceiling for the federal portion was \$165 per week of study or about \$5,610 for a typical 34-week school year.

Under CSLP rules, parental income is taken into account only in the case of dependent students. Students are classified as independent if they are married, are single parents, have been in the labour force in the last 24 months, or left high school more than four years ago. For example, for a family of four, the annual parental contribution for dependent students is considered zero if the combined gross parental income is under \$50,000, about \$3,000 if it is \$75,000, and about \$11,000 if it is \$100,000. Non-borrowers were approximately classified based on information available for all youth in the Longitudinal Administrative Database.

Students must begin to repay their loan six months after completing or ceasing full-time postsecondary studies. Interest on the loan accrues from the time they stop being a full-time student. The actual rates and conditions for repayment are set when they begin repaying.

**Chart C Proximity to a postsecondary institution has more impact on enrolment rates at lower incomes.**



Sources: Longitudinal Administrative Database, 2000;  
Canada Student Loans Program, 1999-2000

### Proximity to university or college has little influence on loan amounts

Students whose families live beyond commuting distance to postsecondary institutions are far more likely to leave home to study. This implies greater costs. Previous research has shown that “the median annual non-educational expenditure of full-time students living with their parents was \$3,800 compared with just over \$8,000 for those who did not live with their parents” (Barr-Telford et al. 2003).

The take-up rate of CSLP loans appears to reflect the difference in financial need of students. For example, it is higher for those who live near a college (41%) than for those who live near a university (30%). On the other hand, the average level of CSLP loan varied by only about \$400 across the three proximity groups (Table 2). Several reasons are possible. For example, youth who live beyond commuting distance of a university are more likely to attend a nearby college. Another factor may be that the same loan limit applies for all students.

**Table 2 Postsecondary enrolment and CSLP take-up by proximity to institution**

Parental income	Youths 18-24	Enrolled full- time	Borrowers	
			Total	Average loan
	'000	%	%	\$
<b>Near university<sup>1</sup></b>	<b>1,644.1</b>	<b>34.6</b>	<b>30.3</b>	<b>4,023</b>
< \$20,000	195.0	24.4	50.8	4,223
\$20,000 < \$40,000	303.2	27.2	50.8	4,142
\$40,000 < \$60,000	308.7	30.8	43.9	4,026
\$60,000 < \$80,000	292.5	33.7	32.6	3,759
\$80,000 < \$100,000	210.1	38.6	20.6	3,750
\$100,000 and over	334.6	49.1	9.7	4,181
<b>Near college only</b>	<b>297.8</b>	<b>29.8</b>	<b>41.2</b>	<b>4,349</b>
< \$20,000	38.0	16.7	61.6	4,605
\$20,000 < \$40,000	65.0	23.0	59.5	4,561
\$40,000 < \$60,000	61.2	26.7	56.0	4,463
\$60,000 < \$80,000	54.6	32.5	42.0	4,096
\$80,000 < \$100,000	36.6	37.3	29.5	3,911
\$100,000 and over	42.5	46.7	15.8	4,156
<b>Near neither</b>	<b>93.0</b>	<b>23.9</b>	<b>37.9</b>	<b>3,924</b>
< \$20,000	18.4	10.9	50.0	4,555
\$20,000 < \$40,000	21.6	19.4	51.5	4,445
\$40,000 < \$60,000	18.3	24.7	49.0	4,378
\$60,000 < \$80,000	14.9	27.3	39.2	4,090
\$80,000 < \$100,000	9.7	33.8	26.7	3,935
\$100,000 and over	10.0	40.9	13.7	2,661

<sup>1</sup> Virtually all youth who live within commuting distance (70 km) of a university also live within commuting distance of a college.

Sources: Longitudinal Administrative Database, 2000;  
Canada Student Loans Program, 1999-2000

### Young women have higher CSLP take-up and postsecondary enrolment

In 2000, young women had both a higher full-time postsecondary participation rate and a higher CSLP take-up rate than young men. On average, the enrolment gap was 8 percentage points (38% versus 30%), while the CSLP take-up rate gap was 5 points (34% versus 29%) (Table 3).

### Loans in Ontario are well targeted to low-income families

The Atlantic region had the highest CSLP take-up rate (45% versus 31% or less elsewhere). Nevertheless, its average postsecondary enrolment rate (30%) was similar to the other regions except Ontario (36%) (Table 4).



**Table 3 Postsecondary enrolment and CSLP take-up by sex**

Parental income	Youths 18-24	Enrolled full- time	Borrowers	
			Total	Average loan
	'000	%	%	\$
<b>Men</b>	<b>1,072.0</b>	<b>29.5</b>	<b>29.2</b>	<b>4,025</b>
< \$20,000	135.9	19.0	47.8	4,241
\$20,000 < \$40,000	205.8	22.0	48.1	4,177
\$40,000 < \$60,000	204.6	25.9	43.5	4,041
\$60,000 < \$80,000	189.7	29.6	30.8	3,770
\$80,000 < \$100,000	134.3	34.3	20.4	3,675
\$100,000 and over	201.7	44.8	9.6	4,125
<b>Women</b>	<b>963.0</b>	<b>37.8</b>	<b>34.4</b>	<b>4,107</b>
< \$20,000	115.6	26.0	55.6	4,307
\$20,000 < \$40,000	183.9	30.6	55.3	4,266
\$40,000 < \$60,000	183.7	34.4	47.7	4,182
\$60,000 < \$80,000	172.1	37.4	37.1	3,877
\$80,000 < \$100,000	122.1	42.6	23.7	3,866
\$100,000 and over	185.4	52.7	11.2	3,877

Sources: Longitudinal Administrative Database, 2000;  
Canada Student Loans Program, 1999-2000

Of all the regions, Ontario stands out as having the most targeted loans and the most evenly distributed enrolment rates. Its average CSLP take-up rate was similar to other regions except the Atlantic, but the gap in take-up rates between low and high parental incomes was the greatest.

Ontario also had one of the narrowest gaps in enrolment rates between low and high parental income youth. While it is tempting to conclude that the more targeted CSLP loans are a factor, the differences between Ontario and other regions need further investigation.

### Immigrant youth have higher CSLP take-up and postsecondary enrolment rates

Finally, students from families that came to Canada since 1980 had a much higher CSLP take-up rate than others (45% versus 31%). The difference was concentrated mostly in the \$40,000 to \$100,000 parental income range (a gap of about 7 percentage points). The remaining gap was attributable to lower parental incomes (for example, 58% of immigrant students had parental income below \$40,000, compared with 29% of other students) (Table 5).

**Table 4 Postsecondary enrolment and CSLP take-up by region**

Parental income	Youths 18-24	Enrolled full- time	Borrowers	
			Total	Average loan
	'000	%	%	\$
<b>Atlantic</b>	<b>234.6</b>	<b>30.3</b>	<b>45.4</b>	<b>4,680</b>
< \$20,000	36.2	16.5	66.5	4,866
\$20,000 < \$40,000	58.0	22.3	65.9	4,838
\$40,000 < \$60,000	54.3	28.6	59.6	4,696
\$60,000 < \$80,000	38.8	35.3	42.2	4,271
\$80,000 < \$100,000	22.4	43.8	26.4	4,389
\$100,000 and over	25.0	52.4	16.5	5,037
<b>Ontario</b>	<b>982.4</b>	<b>35.9</b>	<b>31.0</b>	<b>3,896</b>
< \$20,000	108.1	25.7	56.0	4,141
\$20,000 < \$40,000	172.7	28.6	54.6	4,062
\$40,000 < \$60,000	177.1	31.9	46.9	3,966
\$60,000 < \$80,000	177.0	34.1	34.5	3,603
\$80,000 < \$100,000	130.7	39.0	20.9	3,467
\$100,000 and over	216.8	49.6	8.3	3,898
<b>Manitoba and Saskatchewan</b>	<b>215.9</b>	<b>31.0</b>	<b>29.7</b>	<b>4,079</b>
< \$20,000	30.4	14.9	46.9	4,327
\$20,000 < \$40,000	47.7	23.9	47.4	4,182
\$40,000 < \$60,000	46.7	28.7	41.0	4,126
\$60,000 < \$80,000	39.6	33.9	26.8	3,920
\$80,000 < \$100,000	24.2	40.9	18.6	4,219
\$100,000 and over	27.2	52.5	10.1	3,556
<b>Alberta</b>	<b>284.6</b>	<b>30.7</b>	<b>30.9</b>	<b>3,753</b>
< \$20,000	30.0	17.8	50.3	3,896
\$20,000 < \$40,000	52.5	22.5	50.5	3,735
\$40,000 < \$60,000	53.2	25.9	43.1	3,675
\$60,000 < \$80,000	50.1	30.6	36.5	3,660
\$80,000 < \$100,000	38.0	35.6	24.2	3,726
\$100,000 and over	60.8	45.1	12.7	3,978
<b>British Columbia</b>	<b>316.6</b>	<b>32.3</b>	<b>28.2</b>	<b>4,279</b>
< \$20,000	46.7	26.2	38.1	4,299
\$20,000 < \$40,000	58.7	27.3	37.5	4,390
\$40,000 < \$60,000	57.0	29.5	35.4	4,204
\$60,000 < \$80,000	56.2	31.4	30.3	4,204
\$80,000 < \$100,000	41.1	34.1	24.1	4,160
\$100,000 and over	56.9	44.9	13.8	4,415

Sources: Longitudinal Administrative Database, 2000;  
Canada Student Loans Program, 1999-2000

Immigrant youth also had slightly higher full-time enrolment rates. The difference was more pronounced within similar parental income groups. The reason is that immigrant parental incomes are lower. As a result, the overall differential in enrolment rates is smaller than that observed within specific income brackets.

**Table 5 Postsecondary enrolment and CSLP take-up by immigration status**

Parental income	Youths 18-24	Enrolled full- time	Borrowers	
			Total	Average loan
	'000	%	%	\$
<b>Recent immigrants<sup>1</sup></b>	<b>181.1</b>	<b>34.7</b>	<b>44.8</b>	<b>3,857</b>
< \$20,000	52.8	29.2	50.5	4,196
\$20,000 < \$40,000	51.9	32.1	54.4	3,868
\$40,000 < \$60,000	32.6	35.1	52.3	3,721
\$60,000 < \$80,000	20.5	38.8	40.4	3,406
\$80,000 < \$100,000	10.9	44.3	28.4	3,528
\$100,000 and over	12.4	52.8	11.5	3,709
<b>Others</b>	<b>1,853.4</b>	<b>33.3</b>	<b>30.7</b>	<b>4,077</b>
< \$20,000	198.5	20.4	52.6	4,343
\$20,000 < \$40,000	337.9	25.2	51.6	4,284
\$40,000 < \$60,000	355.5	29.4	45.0	4,168
\$60,000 < \$80,000	341.3	32.9	33.7	3,859
\$80,000 < \$100,000	245.5	38.0	21.8	3,807
\$100,000 and over	374.7	48.5	10.4	3,787

<sup>1</sup> 1980 or laterSources: Longitudinal Administrative Database, 2000;  
Canada Student Loans Program, 1999-2000

## Summary

The CSLP is well targeted by level of parental income. Ignoring the distinction between dependent and independent students, 52% of all full-time postsecondary students with parental income below \$40,000 received a loan in 2000, compared with 14% of students with parental income of \$80,000 and over. However, wide discrepancies in enrolment rates by level of parental income still remain. For example, the enrolment rate for the group with parental income of \$80,000 or more was almost double that of the group under \$40,000 (44% versus 25%).

Of course, differences by parental income are not entirely due to financial factors. Parental education, although highly correlated with income, is an even stronger factor. Nevertheless, low parental income remains a significant barrier to postsecondary education.

## Perspectives

### Postsecondary enrolment by parental education

Parental education and income	Full- time univer- sity	Full- time college	Part- time either
	%		
<b>All youth</b>	<b>19.2</b>	<b>12.7</b>	<b>10.8</b>
<b>University</b>	<b>32.9</b>	<b>11.2</b>	<b>10.8</b>
< \$20,000	27.5	9.8	12.1
\$20,000 < \$40,000	27.4	11.0	10.2
\$40,000 < \$60,000	27.5	11.3	11.9
\$60,000 < \$80,000	29.6	11.9	11.5
\$80,000 < \$100,000	33.0	12.1	10.9
\$100,000 and over	39.4	10.7	9.9
<b>College only</b>	<b>15.8</b>	<b>16.1</b>	<b>11.4</b>
< \$20,000	12.1	13.6	10.6
\$20,000 < \$40,000	13.2	14.1	11.2
\$40,000 < \$60,000	14.5	15.9	11.0
\$60,000 < \$80,000	15.7	16.6	11.5
\$80,000 < \$100,000	18.0	17.2	12.2
\$100,000 and over	20.3	18.2	11.7
<b>No postsecondary</b>	<b>11.0</b>	<b>11.7</b>	<b>10.4</b>
< \$20,000	8.8	9.3	9.4
\$20,000 < \$40,000	10.2	10.4	10.1
\$40,000 < \$60,000	11.2	11.6	10.6
\$60,000 < \$80,000	11.6	13.6	10.9
\$80,000 < \$100,000	12.9	13.5	10.9
\$100,000 and over	14.5	15.1	11.6

Note: Excludes Quebec, Northwest Territories and Nunavut  
Source: 2001 Census of Population

## Note

1 Additional evidence in the literature shows that the proportion of those going to college is more evenly distributed across family-income levels (De Broucker 2005). Moreover, the majority of young people from low-income families went to college, whereas those who came from high-income families went to university (Lavallée, Pereboom and Grignon 2001).

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# Cracking the RRSP nest egg

*Ted Wannell*

A registered retirement savings plan (RRSP) constitutes a key component of retirement income planning in Canada. RRSPs allow individuals to save pre-tax dollars in a variety of investment instruments wherein interest, dividends and capital gains accrue tax free until the funds are withdrawn. RRSPs work in conjunction with employer-provided registered pension plans (RPPs) to supplement the basic public pension plans: Old Age Security and Guaranteed Income Supplement (OAS/GIS), and the Canada and Quebec Pension Plans (C/QPP).

The tax-sheltering features of RRSPs have made them very popular investment vehicles, heavily promoted by the financial services industry. As of 1999—the last year a comprehensive wealth survey was conducted—half of all families and unattached individuals held RRSPs totalling \$343 billion. This accounted for 9.8% of all household assets, following principal residences (31.5%), employer pension plans (17.3%), and business equity (10.1%). The foregone tax revenue on RRSP deductions and the income generated by this wealth is estimated to be more than 1% of GDP annually—about \$10 billion (Canada 2004).<sup>1</sup>

However, the taxman will eventually receive his due. RRSPs must be converted into an annuity or a registered retirement income fund (RRIF) in the year the taxpayer turns 69, with prescribed minimum withdrawals starting the following year. Income tax is then paid at the applicable marginal rate. The basic planning assumption is that this rate will probably be lower than when the contributions were made, since income is generally lower after retirement. Nonetheless, RRSP withdrawals already generate significant tax revenues—estimated at over \$4 billion in 2002 (Canada 2004).

These should continue to grow rapidly, given the aging of the population, the increasing wealth held in RRSPs, and the characteristics of RRSP investors.

Past research on RRSP contributors found employees belonging to registered pension plans (RPPs) far more likely to contribute than those without pension plans (Akyeampong 1999). Although subsequent research indicated that the elevated contribution rates of RPP members had more to do with other personal and job characteristics (Palameta 2001, 2003), the fact remains that 60.4% of RRSP contributors can count on collecting employer pensions on top of OAS/GIS and C/QPP benefits. Moreover, those with at least some RPP assets held 62.8% of the RRSP wealth in 1999. These facts would indicate that much of the income stream flowing out of RRIFs will be taxed at relatively high marginal rates.

Some financial writers have taken note of the downstream tax consequences of RRSP investing (for example, Cestnick 2003), pointing out that at some juncture it becomes more advantageous for a high-income earner to invest in non-registered instruments. Two factors need to be considered: Capital withdrawals from non-registered instruments are not subject to income tax (unlike with RRIFs), and some forms of investment income (notably dividends and capital gains) are taxed at lower rates.

Other commentators have questioned the wisdom of RRSP saving at the lower end of the income spectrum (for example, Shillington 2003; Hamilton 2001), arguing that current-year deductions are negligible for most low-income earners, whose marginal income tax rates are low or even zero. More importantly, if their savings do grow to the extent that they could provide a significant stream of income in retirement, much of that extra money would be clawed back from means-tested income support programs (OAS/GIS) or other social benefits (such as subsidized housing).

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These issues have spawned proposals for an alternate form of registered saving: tax pre-paid accounts (Poschmann and Robson 2004). Such accounts, referred to as Roth plans in the United States, offer no deduction for contributions, but tax-free withdrawals in retirement. Proponents argue that such plans could solve some of the retirement savings dilemmas of both high- and low-income workers.

For a topic of interest to many groups—policy-makers, financial planners, individual savers, and those marketing goods and services to seniors—precious little hard information is available on RRIF income. That void can be partially filled by exploiting the Longitudinal Administrative Databank (LAD), the largest available source for RRSP-generated income, to document the apparent size of the mandatory conversion effect and its differential impact across the income spectrum and various groups of interest (see *Data source and definitions*).

### Some bumps in the road

The ideal data source for RRSP-generated income would have several attributes:

- details on all the different types of RRSP-generated income—withdrawals, pre-age-69 annuities, mandatory conversion annuities, and RRIF withdrawals
- information on all other sources of income
- individual and family characteristics

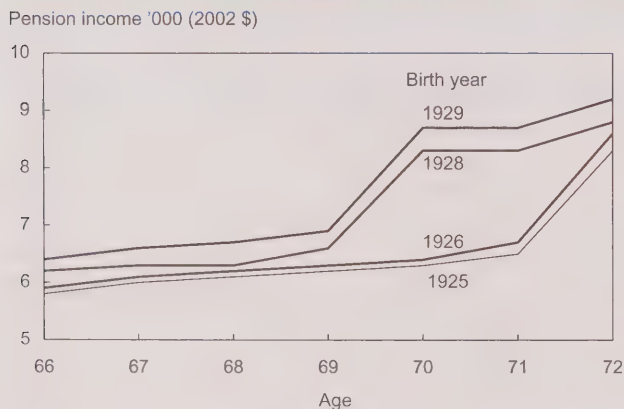
- multiple years of data
- a sample large enough to allow robust inferences regarding relatively small, specific groups

Currently, no sample survey comes close to meeting all these criteria. However, the LAD—an amalgam of income tax and other information—provides enough information and a large enough sample to examine the impact of mandatory conversion.

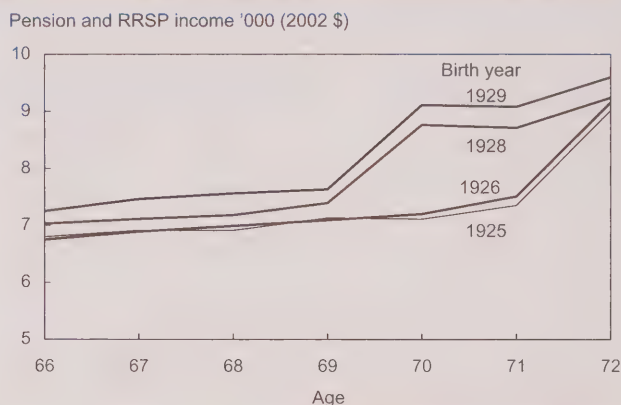
Its main shortcoming is the compression of RRSP-generated income into two variables: T4RSP income, and pension income (PI). The former includes direct withdrawals from RRSPs and income from RRSP-financed annuities. Combining these two represents very little loss of specificity since both are fully RRSP-financed. On the other hand, PI includes RRIF-generated income and income from employer pension plans (C/QPP income is recorded separately). However, the longitudinal nature of the data allows an approximation of the mandatory conversion effect by looking at the change in PI from age 69 to age 70, where the effect is clearly observable.

Since the tax effects of mandatory conversion are also of interest, changes to the federal and provincial income tax codes introduce another confounding factor. A series of reductions to the federal marginal tax rates was announced in 1999, potentially making it difficult to untangle the impact of mandatory conversion on effective tax rates. Fortunately (for taxpayers and this analysis), the rate reductions were accelerated

**Chart A Mandatory conversion causes a sharp increase in T4 pension income ...**



**... which is partially offset by the drop in RRSP withdrawals.**



Source: Longitudinal Administrative Databank, 2001-2002

between the 2000 and 2001 tax years, leaving rates stable between 2001 and 2002, the focus of much of the analysis.<sup>2</sup>

### Mandatory conversion provides income boost

The effects of mandatory conversion can be seen in PI, which shows a significant jump at age 70 in recent years and at age 72 before the mandatory conversion age was lowered for the 1997 tax year (Chart A). Average PI typically increases by about 25% (about \$1,800) at the time of conversion.

However, looking solely at PI overestimates the income effect of mandatory conversion since T4RSP income (from RRSP withdrawals and RRSP-generated annuities) falls by about \$300 at the same time. So the net effect is closer to \$1,500.

RRSP-generated income has been rising across birth cohorts, indicating that RRSP assets are increasing for younger cohorts relative to older ones. What is not immediately obvious is that annuity income after age 69 (residual T4RSP income) has been declining across cohorts, indicating a trend towards managing assets within RRIFs rather than exercising the annuity option at mandatory conversion.

### Average mandatory conversion effect is small in relation to total income

Among seniors, income generally declines with age. Employment income falls due to both declining employment rates and fewer working hours among those who continue to hold jobs. The real value of private pension income may fall for those with non-indexed pensions. And, investment income may also decline as seniors draw down their assets.

To illustrate, mandatory conversion provided a net boost of about \$1,600 for 70 year-olds in 2002, equivalent to 6.6% of their 2001 income (Table 1). However, their taxable income increased by only \$800 (3.2%). So the boost from mandatory conversion represents a temporary upward shift in a generally declining age-income profile for seniors.

These findings also give a first glimpse of the tax consequences of mandatory conversion. Average taxes paid increased from \$4,000 in 2001 to \$4,200 in 2002. This increase (about \$40 million for the entire cohort) is the lower bound of the taxation boost fuelled by mandatory conversion.<sup>3</sup> Although the increase in taxes

**Table 1 Income change at mandatory conversion for all taxfilers**

	2001 Age 69	2002 Age 70
		\$
<b>Total taxable income</b>	<b>24,900</b>	<b>25,700</b>
Pension income	7,000	9,000
T4RSP income	700	350
All other	17,200	16,350
Taxes paid	4,000	4,200
Effective tax rate (%)	16.1	16.3

Source: Longitudinal Administrative Databank

paid nudges the average tax rate only from 16.1% in 2001 to 16.3% in 2002, it represents an effective tax rate of 25.0% on the \$800 increase in taxable income.

### Mandatory conversion effect increases with income

Previous research has shown, not surprisingly, that high-income earners contribute more to RRSP accounts and accumulate more RRSP wealth. Since they are also more likely to have registered pension plans and other financial assets, high-income earners may have little need to withdraw from their RRSP accounts prior to mandatory conversion. These factors should combine to produce a much stronger mandatory conversion effect, which is indeed the case.

Dividing 69-year-old taxfilers into five equal groups sorted by income shows that the percentage within each quintile who experienced more than a \$2,400 increase in PI from age 69 to age 70 rises steadily from 5% in the lowest quintile to 56% in the top (Chart B).

The situation is similar if a relative, as opposed to absolute, increase in income is used as the measure. Just 3% of the bottom quintile experienced more than a 5% increase in income at age 70, compared with 43% in the top quintile. Clearly, income matters in terms of mandatory conversion, indicating that much of the outflow from RRSPs will be taxed at relatively high marginal rates.



## Data source and definitions

The **Longitudinal Administrative Databank (LAD)** is based on a 20% sample of T1 tax records. The charts in the article focus on all individuals who filed valid returns in the stated age and year combinations. The tables are based on approximately 202,000 individuals whose 69<sup>th</sup> birthday fell in 2001 and who filed valid returns in 2001 and 2002. This pair of years was chosen since minimal changes in federal tax rates occurred then. The marginal rate boundaries for federal income tax were adjusted for inflation, and income items in this study have been adjusted accordingly (to 2002 dollars). Other recent year pairs yielded similar results for income items, but the tax results were more variable because of changes to the federal marginal rates.

**Registered retirement savings plans (RRSPs)** are for individuals, including the self-employed. They are registered for purposes of the federal *Income Tax Act*. Contribution limits are based on earned income and the presence of any employer-sponsored pension plan. An RRSP's value is based on accumulated contributions and return on investment. Contributions are tax-deductible and the investment income is tax-deferred, but withdrawals are taxable.

**Registered retirement income funds (RRIFs)** are for individuals, established at financial institutions, and registered under the *Income Tax Act*. They are meant to provide income in retirement. RRIFs are established by transferring monies directly from RRSPs or registered pension plans. Withdrawals from a RRIF are taxable. A minimum amount must be withdrawn each year, beginning the year after the RRIF is established.

The **Canada and Quebec Pension Plans (C/QPP)** are contributory, earnings-related, social insurance programs that ensure a measure of income protection for contributors and their families against the loss of income due to retirement, disability or death.

**Old Age Security (OAS)** is a taxable monthly payment to Canadians 65 and older, based on years of residency in Canada. The **Guaranteed Income Supplement (GIS)** is a non-taxable benefit paid to lower-income OAS recipients. Both are income-tested and can be clawed back as income increases.

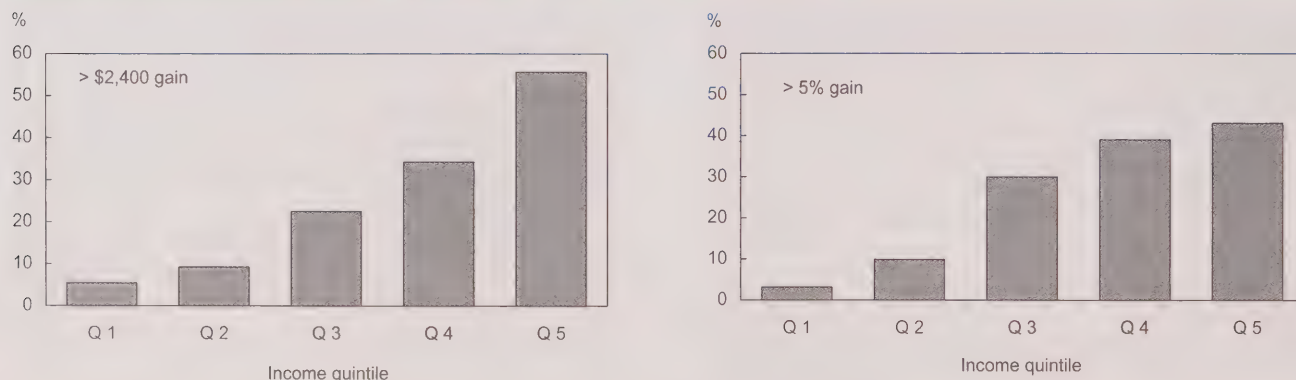
**Registered pension plans (RPPs)** are sponsored by employers or unions and usually funded through contributions by both employees and employers. RPPs must satisfy certain conditions and be registered for purposes of the federal *Income Tax Act*. Contributions to RPPs are tax-deductible and their investment income is tax-deferred, but payments from them are taxable.

The **effective average tax rate** is the ratio of taxes paid to taxable income. This is also referred to as the ratio of averages or aggregate tax rate.

The **marginal tax rate** is not used since it connotes the tax rate on the highest dollar of income at the individual level—a figure not calculated here. Moreover, it may imply that clawbacks have been accounted for. As long as the taxes paid remain at zero (fairly common for low-income seniors), clawback effects will not be observed with the effective average tax rate calculation (see *Means testing for OAS and GIS*).

(Definitions have been adapted from the Department of Finance glossary of frequently used terms. Internet: [www.fin.gc.ca/gloss/gloss-e.html](http://www.fin.gc.ca/gloss/gloss-e.html).)

**Chart B The effects of mandatory conversion increase with income in both absolute and relative terms.**



Source: Longitudinal Administrative Databank, 2001-2002

## Groups of interest

While financial planners may promote investment strategies that apply to broad cross-sections of the population, the circumstances of the individual must be considered. For some, commentators have questioned the merit of RRSPs; for others, RRSP income is inherently an important part of their retirement income. These two groups inhabit mainly the high and low ends of the income spectrum.

### Seniors reliant on public pensions

The evolving public pension system—comprising OAS/GIS and the C/QPP—has been instrumental in raising the average income of seniors, keeping many above the low-income cutoff line (Myles 2000). At the same time, many seniors have become increasingly reliant on these payments, which now account for a greater proportion of seniors' income than in the past.

As noted, RRSPs are a less tax-efficient strategy for low-income earners since the tax breaks associated with both the initial investment and the investment

growth are relatively small, given the progressive nature of the income tax system. Many low-income earners pay no tax and even more pay at very low marginal rates (Table 2). RRSP savings thus provide them with little in the way of tax relief, while the downstream withdrawals may affect means-tested social benefits such as the OAS/GIS (see *Means testing for OAS and GIS*).

In 2001, nearly a third of 69 year-olds (32.3%) were reliant on public pensions for at least three-quarters of their total income. One in five of these individuals had some PI in that year, averaging \$1,800. After mandatory conversion, almost a third (31.8%) collected PI averaging \$2,600. Although average effective tax rates were very low among those reliant on public pensions, 1.2% in the year they turned 69, the rate rose to 1.7% the following year—an effective tax rate of 12.0% on the increased income after mandatory conversion.

If the population is further limited to those almost entirely reliant on OAS/GIS, the effective tax rate is 0% for each year, even though small proportions do collect some PI (1.7% at age 69 and 5.9% at age 70).

**Table 2 Mandatory conversion and reliance on C/QPP and OAS/GIS**

	2001 Age 69	2002 Age 70
<b>Over 75% of income (32.3%)</b>		\$
Total taxable income	9,400	9,900
Pension income	370	820
T4RSP income	110	70
All other	8,920	9,010
Taxes paid	110	170
Effective tax rate (%)	1.2	1.7
<b>50% to 75% of income (23.3%)</b>		
Total taxable income	17,500	18,200
Pension income	3,900	5,200
T4RSP income	550	240
All other	13,050	12,760
Taxes paid	1,100	1,300
Effective tax rate (%)	6.3	7.1
<b>Less than 50% of income (44.4%)</b>		
Total taxable income	40,100	41,200
Pension income	13,500	16,900
T4RSP income	1,200	610
All other	25,400	23,690
Taxes paid	8,300	8,600
Effective tax rate (%)	20.7	20.9

Source: Longitudinal Administrative Databank

### Means testing for OAS and GIS

OAS is a residency-based, taxable social benefit for those 65 and older. It is intended as a base level of income support for seniors and is clawed back only at quite high levels of individual income. During the final quarter of 2002, the maximum monthly OAS benefit was \$449. At that time, benefits were reduced by 15 cents per dollar of annual income in excess of \$56,968.

The GIS is a non-taxable benefit targeted specifically to low-income seniors. In the final quarter of 2002, it paid a maximum of \$534 to those living alone or \$348 to each spouse in a senior couple. An allowance is available for spouses or widowed spouses (aged 60 to 64) of GIS recipients.

The GIS and Allowance are clawed back at much higher rates than the OAS. The GIS is reduced by 50 cents for every dollar of non-OAS income. The Allowance consists of both an OAS and a GIS component; the OAS component is reduced by 75 cents per dollar, the GIS component by 50 cents.

The means testing of other social benefits, such as rent subsidies and provincial drug benefits, could conceivably result in situations where the tax-back rate on RRSP-generated income approaches or exceeds 100%. In other words, RRSP income could make some low-income seniors less well off. In addition, high clawback rates are a disincentive for low-income seniors to participate in the labour market, since the added earnings may not result in net financial improvement.



One would expect to see some reduction in average OAS/GIS corresponding to an increase in PI, but the small amounts involved (\$50 on average) may be offset by, for example, a small increase in the percentage receiving the GIS (Table 3).

Some small declines in OAS/GIS were evident among those with somewhat less reliance on this program (for whom it represented between 50% and 90% of total income—data not shown). For these individuals, mandatory conversion coincides with an average increase of \$200 to \$300 in total income and an average loss of \$100 in GIS. This corresponds to the GIS tax-back rate of 50%. Rough calculations indicate that this situation could affect up to 1 in 20 seniors at mandatory conversion.<sup>4</sup>

**Table 3 Mandatory conversion and reliance on OAS/GIS**

	2001 Age 69	2002 Age 70
<b>90% and over of income (4.4%)</b>		
Total taxable income	4,800	5,000
Pension income	20	90
T4RSP income	10	10
All other	4,770	4,900
Taxes paid	0	0
Effective tax rate (%)	...	...
<b>70% to less than 90% of income (8.7%)</b>		
Total taxable income	6,300	6,500
Pension income	70	220
T4RSP income	50	30
All other	6,180	6,250
Taxes paid	10	30
Effective tax rate (%)	0.2	0.5
<b>50% to less than 70% of income (12.6%)</b>		
Total taxable income	9,900	10,200
Pension income	370	790
T4RSP income	150	50
All other	9,380	9,360
Taxes paid	50	100
Effective tax rate (%)	0.5	1.0
<b>Less than 50% of income (74.3%)</b>		
Total taxable income	30,900	31,800
Pension income	9,400	11,900
T4RSP income	920	460
All other	20,580	19,440
Taxes paid	5,400	5,600
Effective tax rate (%)	17.5	17.6

Source: Longitudinal Administrative Databank

### Substantial employer pensions

At the other end of the spectrum are seniors with employer pensions exceeding their combined C/QPP and OAS/GIS. Just one in five 69 year-olds fit this definition, and their average income was more than double that of the other 80%—\$43,000 compared with \$20,200 (Table 4). At mandatory conversion, average PI for this group increased by \$2,400 (\$1,860 after accounting for the drop in RRSP withdrawals). This compares with a \$1,900 increase (\$1,580 netting out RRSP withdrawals) for the remaining population. So mandatory conversion does *not* have a disproportionate effect on those with substantial employer pensions.

Tax rates may be more of a concern to higher-income seniors, such as those with significant pension benefits. With their greater income, those with substantial pension benefits pay taxes at a higher average rate than other seniors, 20.5% versus 13.9%. The average tax remained the same for both groups at age 69 and 70, with only slightly higher average rates on the increase in average income.

### Early RRSP withdrawers

Significant RRSP withdrawals prior to mandatory conversion may be an indicator of seniors who have not saved adequately to match their spending habits.

**Table 4 Mandatory conversion and significant employer pensions**

	2001 Age 69	2002 Age 70
<b>T4 pension income less than or equal to C/QPP + OAS/GIS (79.5%)</b>		
Total taxable income	20,200	20,900
Pension income	2,300	4,200
T4RSP income	610	290
All other	17,290	16,410
Taxes paid	2,800	2,900
Effective tax rate (%)	13.9	13.9
<b>T4 pension income larger than C/QPP + OAS/GIS (20.5%)</b>		
Total taxable income	43,000	44,300
Pension income	25,100	27,500
T4RSP income	1,100	560
All other	16,800	16,240
Taxes paid	8,800	9,100
Effective tax rate (%)	20.5	20.5

Source: Longitudinal Administrative Databank

Alternatively, these withdrawals could be a gauge of high levels of RRSP wealth being drawn down to smooth income and taxes across one's remaining years. It could also be that some seniors are drawing down RRSPs before age 69 to avoid GIS or OAS clawbacks. Each argument finds some support in the data.

Very few 69 year-olds relied on RRSP withdrawals for more than a quarter of their income, just 2.4% (Table 5). Their average withdrawal of \$11,300 boosted mean taxable income to \$29,500. However, mandatory conversion coincided with a drop of \$8,000 in RRSP withdrawals and only a \$5,400 increase in PI. Tallying up all sources, their total income actually dropped by \$1,400 after mandatory conversion. For this group, then, the conversion process may serve as a signal to curb spending.

Those who withdrew more moderate sums from their RRSP prior to conversion better fit the mould of income smoothers. For the one in five 69 year-olds whose RRSP withdrawals made up 25% or less of their income, very small increases in total income (from

\$28,800 to \$29,000) coincided with mandatory conversion, along with a small decline in taxes paid. In comparison, those with no RRSP withdrawal at age 69 experienced a \$1,000 rise in total income (from \$23,800 to \$24,800) and a corresponding rise in their average tax rate.

### Senior workers

Another strategy for those who have not saved enough for a comfortable retirement is to continue working past age 65. But the GIS clawback likely provides an employment disincentive to many low-income seniors. Overall, just one in eight 69 year-olds relied on employment or self-employment earnings for at least a fifth of their income, and only one in twenty-five earned enough to account for more than 60% of total income (Table 6). And the income profile of these older workers suggests that many are self-employed professionals who likely do not have substantial employer pensions.

The 69 year-olds who earned more than 60% of their total income from employment brought in an average of \$78,400 from all taxable sources in 2001—of which only \$2,200 came from PI. These individuals experienced a huge increase in PI after mandatory conversion, more than quadrupling to \$9,600. Although other sources of income drop somewhat, their average total income still increased by \$5,100, adding \$1,500 to their tax bill.

Seniors who rely less on employment income generally have lower taxable income, but higher levels of pension income prior to mandatory conversion. Those who earned between 20% and 60% of their taxable income from employment averaged \$35,600 in total income. This dropped to \$21,500 for those who counted on employment for less than a fifth of their total income (the vast majority of 69 year-olds). Despite their lower total income, these seniors did have higher levels of PI (\$7,400) at age 69 than those who worked more. Those who continued to work, however, had greater RRSP savings, since mandatory conversion corresponds with greater increases in PI for senior workers. As a result, all three groups had similar levels of PI at age 70.

### Conclusion

RRSPs are tax-advantaged savings vehicles that constitute the third pillar of the retirement income system in Canada, the other two being public pensions (OAS/GIS and C/QPP) and registered pension plans

**Table 5 Mandatory conversion and RRSP withdrawals**

	2001 Age 69	2002 Age 70
<b>Over 25% of income (2.4%)</b>		
	\$	
Total taxable income	29,500	28,100
Pension income	5,800	11,200
T4RSP income	11,300	3,300
All other	12,400	13,600
Taxes paid	4,900	4,200
Effective tax rate (%)	16.6	14.9
<b>Over 0% to 25% of income (20.4%)</b>		
Total taxable income	28,800	29,000
Pension income	10,100	12,300
T4RSP income	2,100	760
All other	16,600	15,940
Taxes paid	4,500	4,500
Effective tax rate (%)	15.6	15.5
<b>No withdrawal (77.2%)</b>		
Total taxable income	23,800	24,800
Pension income	6,200	8,000
T4RSP income	0	150
All other	17,600	16,650
Taxes paid	3,800	4,100
Effective tax rate (%)	16.0	16.5

Source: Longitudinal Administrative Databank



**Table 6 Mandatory conversion and senior workers earnings**

	2001 Age 69	2002 Age 70
<b>Over 60% of income (3.9%)</b>		
		\$
Total taxable income	78,400	83,500
Pension income	2,200	9,600
T4RSP income	760	740
All other	75,440	73,160
Taxes paid	24,600	26,100
Effective tax rate (%)	31.4	31.3
<b>Over 20% to 60% of income (8.7%)</b>		
Total taxable income	35,600	36,000
Pension income	5,600	9,400
T4RSP income	910	460
All other	29,090	26,140
Taxes paid	6,800	7,000
Effective tax rate (%)	19.1	19.4
<b>20% or less of income (87.4%)</b>		
Total taxable income	21,500	22,100
Pension income	7,400	8,900
T4RSP income	680	320
All other	13,420	12,880
Taxes paid	2,800	2,900
Effective tax rate (%)	13.0	13.1

Source: Longitudinal Administrative Databank

through an employer. RRSPs are converted into income by way of direct withdrawals or conversion to annuities or RRIFs. RRSPs must be converted into annuities or RRIFs in the calendar year of the holder's 69<sup>th</sup> birthday, with minimum withdrawals mandated for subsequent years.

Mandatory conversion provided an average income boost of about \$1,600 for 70 year-olds in 2002, at a time when other sources of income are generally declining. Since RRIF income is taxed at an individual's marginal rate, the income raises the average effective tax rate and total taxes paid by 70 year-olds. However, this is the basic covenant of the system: RRSP deposits are deducted from taxable income in the year they are made and compound tax free, while withdrawals are likely to occur at lower levels of income and marginal tax rates in retirement.

Of course, no system is perfect for all people. Commentators have noted that RRSPs may not be the most appropriate retirement vehicle for people at the extreme high or low end of the income spectrum.

High-income earners are much more likely to have significant income gains coincident with mandatory conversion, with such gains being taxed at relatively high effective rates. As for low-income earners, a small percentage lose some of their GIS entitlement as a result of RRIF income coming on stream. Some analysts have proposed tax-prepaid retirement savings accounts to fit the needs of these groups. Alternatively, sound financial planning could help to optimize savings and income under the current regime.

Very few individuals currently rely on RRSP-generated income for a significant proportion of their income prior to their 70<sup>th</sup> birthday. Even after mandatory conversion, RRIFs and RRSP-generated annuities account for less than 10% of total income. In absolute terms, seniors who continue earning substantial employment income at age 69 do experience large mandatory conversion effects, but these are generally high-income individuals whose average RRSP-generated income barely surpasses the 10% threshold.

The mandatory conversion effect has been increasing over time, indicating that successive cohorts of Canadians have higher and higher levels of RRSP saving. Other research indicates that employers may increasingly be offering group RRSPs as an alternative to traditional registered pension plans (Morissette and Drolet 2001). These trends indicate that RRSP wealth is likely to become a more important component of seniors' income in the future. As such, data development to provide more precise information on RRSP-generated income merits serious consideration. Further research is also required to better identify the distributional, as opposed to the average, effects within subgroups of particular interest to policy-makers and the financial planning community.

### Perspectives

#### ■ Notes

1 The 1% of GDP estimate represents a long-term rule of thumb since annual estimates of the foregone taxes are highly variable. The most volatile element is the foregone revenue on capital gains and investment income from RRSP wealth. This component is correlated with financial market swings. The other main component is income tax deductions for annual RRSP contribution. This component is correlated with the inflows to RRSP accounts and marginal tax rates.

2 The bracket boundaries were adjusted upward in 2002 to account for inflation, but all income reported in this article has also been adjusted for inflation.


3 The upper bound would be approximately double the lower bound considering the net income increase of \$1,600 related to mandatory conversion. Since the income boost might cause some seniors to work fewer hours (earning less employment income) than would otherwise be the case, this 'substitution effect' would place the true tax revenue effect of mandatory conversion somewhere between the two bounds.

4 The maximum potential proportion experiencing a GIS clawback should be roughly equal to the proportion of the population in the categories experiencing a decline in average GIS payments times the proportion of those categories with non-zero PI at age 70.

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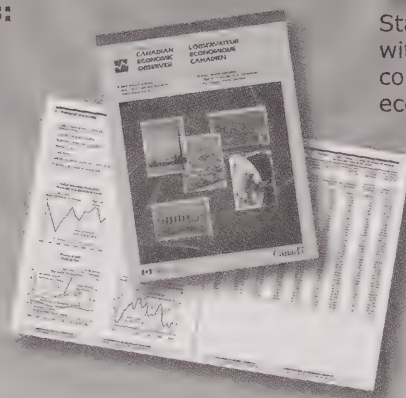
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# On sick leave

Katherine Marshall

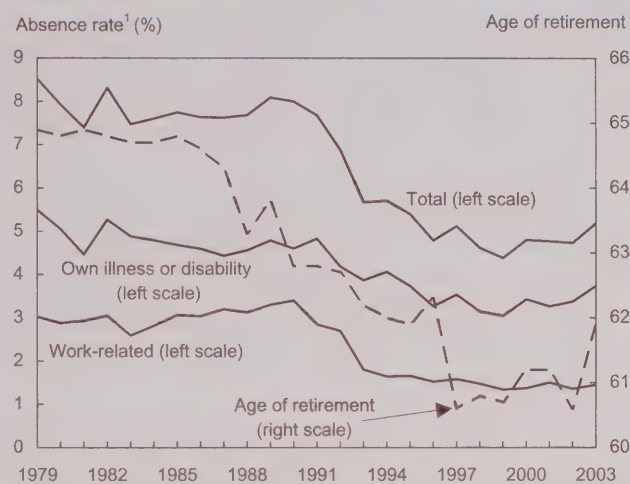
**L**ong-term absences from work because of illness or disability can be costly for an employer. Direct costs include reduced productivity and output as well as replacement of labour, while indirect costs show up in reduced staff morale and lower quality of output. Increasing work stress (Williams 2003; Watson Wyatt 2003) and an aging workforce are just two reasons why absences remain a relevant workplace issue. Strategies for reducing them include improved workplace safety, health promotion activities, and employee assistance programs.

The costs of work absence and the methods for managing it are tangible, but the reasons for its occurrence in the first place are less straightforward. Several disciplines have contributed to the understanding of absenteeism, reflecting the myriad interrelated personal, social (psychological), economic, and environmental factors at play (Kaiser 1998). More specifically, variables studied include personal demographics, health status, attitude toward work, job satisfaction, job content, working conditions, workplace culture, potential lost earnings, and possible reprimand. Understanding absenteeism is further complicated because motivation can vary depending on the type and duration of the absence.

## Work-related absences show biggest decline

In 2003, some 720,000 work absences of two weeks or longer due to illness or disability, 200,000 of which were work-related, were reported in the Survey of Labour and Income Dynamics (SLID). These absences represented 5.2% of all employees, a decline from 5.7% in 1993 (Chart A). The Absence from Work Survey, which also used to collect long-term absence data, found a similar downward trend throughout the 1980s—from 8.5% in 1979 to 6.9% in 1992.<sup>1</sup> Much of the overall decrease occurred because of a reduction

**Chart A The long-term absence rate has dropped 2% in the past two decades.**



<sup>1</sup> Absences divided by annual average employees.

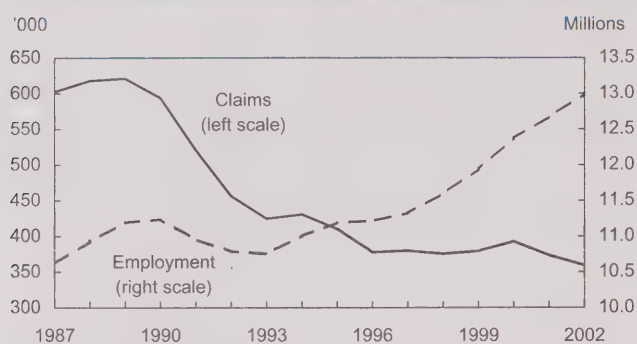
Sources: Absence from Work Survey, 1979-1992; Survey of Labour and Income Dynamics, 1993-2003; Labour Force Survey, 1979-2003

in the work-related absence rate, which fell from 3.0% in 1979 to 2.7% in 1992, and from 1.8% to 1.4% since 1993. These findings are consistent with figures from workers' compensation boards, which also show a steep decline in work injury cases during roughly the same period. The number of accepted claims for time lost due to injury dropped from 602,500 in 1987 to 359,200 in 2002, even though the number of employees increased from 10.6 to 13.0 million (Chart B). Heightened awareness of occupational health and safety issues, including the federal government's creation of the Canadian Centre for Occupational Health and Safety in 1978, is credited for some of the reduction in the work injury rate. The Centre interprets much of the reduction to factors including "changing technologies, better educated workers, and industry

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**Chart B Time-loss injury claims have fallen despite employment gains.**



Sources: Association of Workers' Compensation Boards of Canada, 1987-2002; Labour Force Survey, 1987-2002

initiatives together with occupational health and safety policies and programs" (CCOHS 2003). Furthermore, employment during this period shifted from the goods-producing sector—which generally has higher overall injury rates—toward the service sector (AWCBC 2005).

Long-term absences for personal illness or disability also dropped substantially between 1979 and 1992, from 5.5% to 4.2%, but remained relatively stable during the past decade (3.9% in 1993 and 3.7% in 2003) (Chart A). The large drop in personal illness absence rates in the 1980s may be tied in part to a parallel fall in the median age of retirement (from 64.9 in 1979 to a low of 60.6 in 1997, and under 62 since). Older workers leaving the workforce earlier may have a dampening effect on absence rates since sickness absenteeism rises significantly with age.

### Average time off relatively stable at 11 weeks

Since 1993, the average duration of long-term absences has remained steady at around 10 weeks for personal illness or disability, and 13 weeks for those linked to the workplace (11 weeks for the combined absences). The distribution of weeks off differs by type of absence—with 30% of all work-related absences in 2003 lasting 17 or more weeks, compared with 20% of own-illness and disability absences (Chart C).

While the cross-sectional numbers and their trends over time are useful, additional insights can be gleaned by following individuals over time. This paper focuses

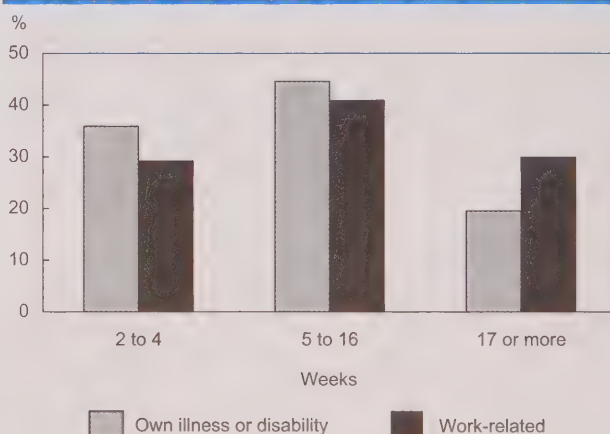
on employees who took a long-term absence in 2002, examining factors preceding the absence (in 2001), as well as any consequences of the absence in 2003 (see *Data sources and definitions*).

### Age, health, unionization, pay and job security key in own illness absence

Of all those with a long-term absence in 2002, 3.3% cited personal illness and 1.3% a work-related illness or injury (Table 1).<sup>2</sup> Although the proportion was higher for women than for men (3.6% versus 3.0%) and for those married rather than unmarried (3.6% versus 2.9%), when considered together with age in a regression model, the only statistically significant demographic variable proved to be age. Among employees aged 45 and over, 4.6% had a long-term illness leave, which made them significantly more likely (1.5 times) to be on leave than those under age 35—even after controlling for personal health or disability.

Not surprisingly, those in poor or fair health, or those with a physical or mental disability prior to their absence, are significantly more likely than other employees to take long-term leave for illness reasons—regardless of age. Although only 740,000 workers reported being in poor or fair health prior to their absence, almost 9% ended up on long-term sick leave (meaning they were 1.7 times more likely to be on leave than those in good health). Also, of the two

**Chart C In 2003, one-third of illness or disability absences<sup>1</sup> lasted one month or less.**



<sup>1</sup> Of those two weeks or longer.

Source: Survey of Labour and Income Dynamics, 2003

## Data sources and definitions

The **Survey of Labour and Income Dynamics (SLID)** began in January 1993. Respondents remain in the sample for six years, and each year approximately 30,000 people aged 16 to 69 complete two detailed questionnaires on labour market activity and income. The survey asks about work absences, other than paid vacations, that lasted one week or longer. If illness or disability is the reason, a subsequent question asks whether the absence was due to a work-related illness or injury. Details are collected for up to two absences (the first and last if more than two occurred) for each job in the year, to a maximum of six jobs. The target population for this paper is all persons who did some paid work in 2002 and had a personal or work-related illness or disability absence from their main paid job that lasted two weeks or longer. The absence must have ended in 2002 or 2003, and respondents must have reported in all three years (2001 to 2003). If a respondent had more than one long-term absence (which was the case for 5% of absence takers), the longest one was examined.

The **Absence from Work Survey (AWS)** was an annual supplement to the Labour Force Survey (LFS) from 1977 to 1998. It asked employees about work absences of at least two weeks duration due to "illness, accident or pregnancy." Detailed information on duration and type of compensation received was collected for the most recent absence.

A **long-term absence** lasts two weeks or longer. The AWS initially focused on absences of at least two weeks as this is the standard waiting period before EI benefits are payable.

An **absence rate** is calculated by dividing the total long-term absences in any given year by the average number of employees in that year. The denominator for the AWS was the LFS, which includes all workers whose main job is paid, while for SLID it consists of all those who had at least one paid job in the year. By definition, the SLID denominator will be somewhat higher than the LFS.

**Extended medical insurance** is an employer-sponsored medical insurance or health plan that supplements public coverage. **Disability insurance** is an employer-sponsored plan providing financial protection in the event of income lost through disability.

**Health status** is self-reported and asked on the SLID labour questionnaire in January of each reference year. Respondents answer the question: "In general, how would you describe the state of your health?" Answers range from poor (5) to excellent (1).

**Disability status** is derived from several questions. Respondents are deemed to have some disability if they report having difficulty with activities of daily living, or if they have a physical or mental condition or health problem that reduces the amount or kind of activity they can do.

**Stress** is also self-reported on the January questionnaire. Respondents are asked the question: "Would you describe your life as...?" Answers range from 'not at all stressed' (4) to 'very stressful' (1).

million employees with a disability, nearly 8% had an absence in 2002. Controlling for other factors, those with a disability were 2.4 times more likely to have a long-term absence. Prior poor mental or physical health also significantly increased the amount of time off the job. While the average length of own-illness absence was relatively close to 10 weeks for all variables examined, absences for those in fair or poor health, with a disability, or highly stressed averaged 18, 13 and 14 weeks respectively (data not shown).

The combination of two job-related factors—belonging to a union and having medical or disability insurance coverage—also significantly increased the likelihood (1.7 times) of a leave from work for personal illness when compared with workers who had neither benefit. Some 5.0% of unionized and insured employees had an absence. Although working in the public sector appears important (absence rate of 4.8%), the key factors are unionization and supplementary medical insurance. This suggests that two elements—

job protection and lost earnings—are strongly associated with the incidence of long-term leave due to illness.

Past research has shown that "although unions can shield workers from sanctions from absenteeism, this fact would not induce the workers to take more five-day absences" (Chaudhury and Ng 1992). While unions may not directly encourage the use of long-term personal illness leave, they may have the power to protect against possible reprimand and hence may indirectly bolster its use. Furthermore, unionized settings tend to offer more generous sick leave policies. Indeed, almost half (47%) of unionized leave takers reported receiving full pay compensation compared with only one-quarter of the total not unionized (see *Absence compensation*). Therefore, non-unionized workers (with or without insurance coverage) may be more likely to continue working, despite not feeling well, if reprisal is feared or reduced pay is at stake. In reality, choosing to take an absence falls on a continuum, based



**Table 1 Long-term illness or disability rate (two or more weeks) in 2002 by reason and selected indicators**

	Total <sup>1</sup>	Own-illness absence	Odds ratios <sup>2</sup>	Work-related absence	Odds ratios <sup>2</sup>
	'000	%		%	
<b>Total employees</b>	12,636	3.3		1.3	
Men	6,440	3.0	n.s.	1.4	n.s.
Women	6,196	3.6	1.0	1.3	1.0
<b>Age</b>					
Less than 35	5,082	2.2	1.0	0.5 <sup>E</sup>	1.0
35 to 44	3,425	3.4	n.s.	1.9	3.2***
45 and over	4,130	4.6	1.5*	1.9	2.5 **
<b>Married</b>	7,405	3.6	n.s.	1.5	n.s.
Not married	5,231	2.9	1.0	1.1 <sup>E</sup>	1.0
<b>High school or less</b>	5,203	3.6	..	1.3 <sup>E</sup>	..
Postsecondary certificate/diploma/degree	5,933	2.8	..	1.5	..
<b>Health indicators prior to absence</b>					
Good to excellent health	11,832	3.0	1.0	1.1	1.0
Poor or fair health	737	8.8	1.7**	5.4 <sup>E</sup>	n.s.
<b>No disability</b>	10,666	2.6	1.0	0.7	1.0
Physical or mental disability	1,905	7.6	2.4***	4.8	4.6***
<b>Somewhat to not at all stressed</b>	10,557	3.2	1.0	1.0	1.0
Very stressed	1,865	4.5	n.s.	3.4 <sup>E</sup>	2.4***
<b>Job indicators prior to absence</b>					
Not unionized, without insurance <sup>3</sup>	3,851	2.3	1.0	0.7	1.0
Not unionized, with insurance	4,334	3.1	n.s.	0.9	n.s.
Unionized, with insurance <sup>4</sup>	3,795	5.0	1.7*	2.6	3.1 **
<b>Public sector</b>	2,621	4.8	1.0	2.2	1.0
Private sector	10,015	2.9	n.s.	1.1	n.s.
<b>Permanent job</b>	10,010	3.7	1.6*	1.5	..
Temporary job	2,250	2.1 <sup>E</sup>	1.0	F	..
<b>Goods-producing sector</b>	2,982	3.4	1.0	1.2	1.0
Service-producing sector	9,515	3.3	n.s.	1.4	n.s.

1 Individual variable categories may not add to the total due to non-responses.

2 This regression calculation indicates whether certain variables significantly increase or decrease the chances (odds) of having an absence; n.s. = not significant with reference group (1.0).

3 Refers to having supplementary medical and/or disability insurance coverage from the employer.

4 Includes a minority of employees (4.5%) who are unionized but have no insurance coverage.

\* Regression results statistically significant at the .05 level; \*\* at the .01 level, \*\*\* at the .001 level.

Source: Survey of Labour and Income Dynamics, 2001-2003

on factors such as perceived consequences, degree of work attachment, and ability to attend (Harrison and Martocchio 1998).

Having extended medical or disability coverage is a strong indicator that paid sick leave is also a job benefit. In this case, some or all of an extended illness

absence would be paid for. Almost two-thirds of those with insurance coverage who were on long-term leave because of personal illness were partially or fully paid by their employer while off work, compared with only a small minority of those uninsured (see *Absence compensation*). Even though many employees without paid

sick leave can apply for Employment Insurance (EI) sickness benefits, those who are eligible must first undergo a two-week unpaid waiting period. They then receive only 55% of their earnings to a maximum of \$413 per week. On the other hand, those with insurance coverage are likely to receive paid sick leave for the waiting period. Again, depending on the degree of illness, some choice could be involved as to staying at work or not, with potential loss of earnings playing a large part in that decision.

Job security is another issue linked with personal illness absences. Permanent employees were 1.6 times more likely to have a long-term absence than those with a temporary, term, contract or casual job.<sup>3</sup> This finding aligns with the hypothesis that a lack of job security is associated with reduced absence because of either the fear of layoff or the desire for contract renewal. “Employees on temporary contracts have stronger incentives for job attendance when this affects future employment chances” (Arai and Thoursie 2005).

### **Stress an important issue in work-related absences**

As with personal illness absences, age is also a factor with work-related absences (Table 1). Older workers, whether in excellent or poor health, were more than twice as likely as younger workers to have a long-term absence, suggesting that they are more prone to work-related accidents, injuries or illness. However, regardless of age, having a physical or mental disability significantly increased the chances (4.6 times) of having a work-related absence due to illness or disability. Health status prior to absence, whether poor or excellent, was not a significant factor.

Interestingly, stress is a factor with work-related absences only. Employees feeling very stressed were 2.4 times more likely to take a leave than those not overly stressed. Recent research has found that half of all employees report single or multiple stresses in their work environment (Williams 2003). Also, on- and off-the-job stress is associated with depression among workers, and depression is associated with more disability days than any other chronic condition (Shields forthcoming).

Like employees with a long-term personal illness absence, those whose long-term absence was work-related were more likely to be unionized. Again, unionized workers may be better informed by union

representatives and supervisors of their rights, and may have less fear of reprimand for filing a claim. Protection from reprisal may be more significant than reduced wages in the case of work-related absences. Unlike personal illness absences, equal proportions of insured non-unionized workers (83%) and insured unionized workers (81%) reported receiving payment from their employer as well as workers’ compensation during their absence (see *Absence compensation*). Furthermore, workers’ compensation is available to virtually all workers and usually offers almost full earnings replacement.

Somewhat surprisingly, industry does not seem to be a significant factor in work-related absences despite the differences shown in workers’ compensation injury claim rates. Unfortunately, a more detailed industry or occupational examination of absences was not possible because of the very small sample sizes that would have resulted. Moreover, workers’ compensation claims are not strictly comparable to the SLID absences from work.

### **Post-absence consequences found for those off four months or longer**

Many of the possible downsides to a long-term absence from work are not measurable. These include altered attitudes of co-workers and supervisors, a reduced network, and lowered energy level. Measurable or not, consequences are likely to be greater the longer one is off work.

In terms of measurable consequences, higher rates of stress and poor health were generally seen for those with an extended absence (17 weeks or more), regardless of the reason, in both the year before and the year after the absence (Table 2). One-third of these people felt very stressed in the year prior to the absence compared with only one-seventh of those with no absence. Health was significantly worse in both 2001 and 2003 for all those with a long-term absence of any duration in 2002, compared with those with no absence. Among the extended absence group, fully one-quarter reported fair to poor health before their absence, compared with 1 in 16 of those with no absence.

Furthermore, perhaps because of their accentuated health and stress issues, those with an extended absence were the only ones to reduce their labour market attachment the following year. Among this group, the rate of full-year work dropped significantly, from 84% in 2001 to 58% in 2003, while usual



## Absence compensation

Doing without earnings while on leave for illness or disability for a considerable period of time would likely be difficult for most workers, but fortunately the majority of employees have several options for compensation.

**Employer-based sickness benefits:** The 1995 Survey of Work Arrangements found that 57% of employees had access to paid sick leave, and 59% had a supplemental health plan. Although SLID does not ask about paid sick leave per se, 62% of employees in 2002 had a job that offered extended medical insurance coverage. Many plans require workers to earn sick leave credits based on the amount of time worked. An earned sick leave credit is usually equivalent to full pay. In 2002, half of those with either a personal or work-related long-term absence due to illness or disability received full or partial pay from their employer for the time they were away.

Although it is not possible to tie the receipt of Employment Insurance (EI) or workers' compensation directly to a long-term absence, they are quite likely related when both occur in the same year. One-quarter of those whose absence in 2002 was for personal illness reported EI benefits that year, while 50% of those with a work-related absence received workers' compensation.<sup>7</sup> In total, the majority of absence takers (73% for personal illness and 81% work-related) received some form of compensation.

In all cases, unionization, medical or disability insurance coverage, and job permanency increased the chances of receiving compensation, particularly among those with a personal illness. For example, only a minority of non-unionized employees without insurance received employer compensation for their personal illness absence—although receipt of EI was relatively high for this group (37%). Overall, however, only 45% of this group collected some form of compensation. In comparison, 72% of non-unionized and 89% of unionized workers with insurance coverage received compensation.

**Employment Insurance (EI) sickness benefits** are available to eligible workers who have contributed. To qualify, a person must have had their weekly earnings decrease by more than 40%, accumulated 600 insured hours in the last 52 weeks, and submitted a medical certificate. Sickness benefits are capped at 15 weeks, although benefits can run to a maximum of 50 weeks for other reasons. The basic rate is 55% of average insured earnings to a maximum of \$413 per week. Benefits commence after an unpaid two-week waiting period.

**Workers' compensation** is a provincial statutory insurance plan for personal injury, illness or death caused by or associated with a job. Each province sets its own rules. Despite some provincial differences, the majority of workers in most industries are covered, and plan principles are the same: Employers are solely responsible for the cost (through annual premiums), employees cannot sue in lieu of compensation benefits, and workers are automatically eligible no matter who was responsible for the problem ('no-fault' insurance). Claims must be filed and approved by a workers' compensation board (a neutral agency), and benefits may include medical services, wage-loss benefits, and rehabilitation services. Earnings replacement is upward of 90% of net average wages.

### Employees who received workers' compensation (WC) or Employment Insurance (EI) sometime in 2002, or partial or full pay from their employer during their long-term absence (two weeks or more)

	Own-illness absence				
	Employer compensation (EC)			EI	EC, EI, or both
	Full	Partial	None		
	%				
<b>Total with an absence</b>	<b>33</b>	<b>18</b>	<b>49</b>	<b>27</b>	<b>73</b>
<b>Job characteristics</b>					
Not unionized, without insurance <sup>1</sup>	F	F	91	37 <sup>E</sup>	45 <sup>E</sup>
Not unionized, with insurance	35	16 <sup>E</sup>	48	23 <sup>E</sup>	72
Unionized, with insurance	47	27	26	22 <sup>E</sup>	89
Permanent	36	19	44	25	76
Temporary	F	F	83	40 <sup>E</sup>	52 <sup>E</sup>
	<b>Work-related absence</b>				
	Employer compensation (EC)			WC	EC, WC, or both
	Full	Partial	None		
	%				
<b>Total with an absence</b>	<b>31</b>	<b>18</b>	<b>51</b>	<b>50</b>	<b>81</b>
<b>Job characteristics</b>					
Not unionized, without insurance <sup>1</sup>	F	F	93	64 <sup>E</sup>	64 <sup>E</sup>
Not unionized, with insurance	49 <sup>E</sup>	F	40 <sup>E</sup>	47 <sup>E</sup>	83
Unionized, with insurance	33 <sup>E</sup>	26 <sup>E</sup>	41 <sup>E</sup>	42 <sup>E</sup>	81
Permanent	33	19 <sup>E</sup>	48	47	79
Temporary	F	F	F	F	F

<sup>1</sup> Refers to medical or disability insurance coverage from an employer. The category of those who are unionized but have no insurance coverage is not shown as it represents less than 5% of employees.

Source: Survey of Labour and Income Dynamics, 2001-2003

**Table 2 Health and employment indicators by duration of work absence in 2002**

	No absence	2 to 4 weeks	5 to 16 weeks	17 or more weeks
<b>Very high stress</b>			%	
2001	15	15 <sup>E</sup>	23*	33* <sup>E</sup>
2003	15	20 <sup>E</sup>	20 <sup>E</sup>	36*** <sup>E</sup>
<b>Poor or fair health</b>				
2001	6	17*** <sup>E</sup>	11 <sup>E</sup>	24*** <sup>E</sup>
2003	5 <sup>(*)</sup>	13* <sup>E</sup>	10* <sup>E</sup>	26*** <sup>E</sup>
<b>Employed full year<sup>1</sup></b>				
2001	74	82	87***	84***
2003	78 <sup>(***)</sup>	78	79	58 <sup>(*)</sup> *
<b>Employed full time</b>				
2001	83	81	91**	88
2003	86 <sup>(***)</sup>	87	89	86
<b>Mean weekly usual hours</b>			hours	
2001	33	35	36**	33
2003	34 <sup>(***)</sup>	34	34	30**
<b>Median hourly earnings</b>			\$	
2001	17.00	18.07	17.25	17.12
2003	18.65 <sup>(***)</sup>	19.45	18.25	17.62

<sup>1</sup> Restricted to those whose absence started and ended in 2002 (see Note 4).

\* Regression results statistically significant at the .05 level; \*\* at the .01 level;

\*\*\* at the .001 level.

Numbers in ( ) = significant difference between 2001 and 2003.

Source: Survey of Labour and Income Dynamics, 2001-2003

weekly hours dropped from 33 to 30.<sup>4</sup> Among those without an absence, however, full-year work increased significantly—from 74% to 78%. Other employment indicators suggest that even though 2003 was an economically stronger year than 2001, only those without an absence benefited from this growth. For example, they were the only ones with significantly more full-time work (a rise from 83% to 86%) and longer usual weekly hours (from 33 to 34) in 2003. And, they were also the only employees to enjoy a significant increase in hourly earnings—from \$17.00 in 2001 to \$18.65 in 2003. (Absence takers also had increases, but they were not statistically significant.) Previous research has suggested that absenteeism can lead to decreased performance that can in turn lead to reduced pay and fewer promotions (Harrison and Martocchio 1998).

While this article examined only long-term absence takers who did return to work, the ultimate consequence is that some employees are forced to leave their jobs because of illness. Since 2000, roughly 3% of all annual job separations occurred because of personal or work-related illness or disability. This represents less than 1% of all employees (roughly 73,000).

Another striking consequence of long-term absence is the chance of relapse—another (separate) absence. More than one-third of those whose absence in 2002 ranged from 2 to 16 weeks, and over two-thirds of those whose absence lasted 17 weeks or more, experienced another absence of one week or more before the end of 2003, compared with only one-sixth of those with no absence in 2002 (Chart D).<sup>5</sup>

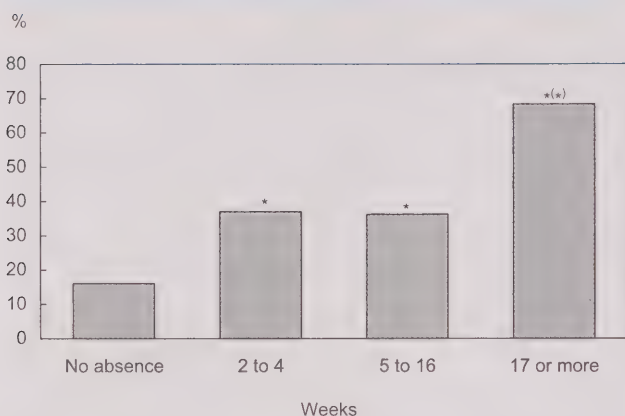
## Conclusion

Although long-term absences for personal illness or disability have seen relatively stable rates over the past decade (3.7% in 2003), they still amounted to more than half a million in 2003. An additional 200,000 work-related absences were observed, but their rate has fallen, hitting 1.4% in 2003. With an average duration of 11 weeks, long-term illness or disability claims undoubtedly have negative consequences for employers, co-workers, and the absentees themselves. At the very least, the work of an absent employee is left undone, shared among those remaining, or carried out by a replacement. The cost of each long-term absence is roughly \$8,800.<sup>6</sup> Furthermore, absences lasting upwards of four months are generally associated with negative health, stress, and career stagnation, as well as heightened chances of being on leave again the following year.

Two job factors significantly influenced an illness or disability absence: having medical or disability insurance coverage through an employer (indicating paid sick leave) and being in a unionized job. The first variable suggests that unless they



**Chart D The majority of those with a long-duration absence in 2002 had an absence of one week or longer in 2003.**



\* Significant difference with "no absence" group; (\*) significant difference with short- and medium-duration groups.  
Source: Survey of Labour and Income Dynamics, 2001-2003

are very sick, people without insurance may stay on the job, since the alternative may result in lost wages. The second—being in a union—alludes to job protection and higher levels of compensation while off work. Another factor in personal-illness absences is job permanency, indicating job security and reduced fear of reprisal.

Age, health status, disability, and stress are important predictors for one or both of long-term personal and work-related illness or disability absences. While the physical and mental health of employees has the potential to change, the aging of the workforce is certain as baby boomers move into their final working years before retirement. As the average age of the workforce increases, so may the rate of long-term work absences due to illness.

Improving employee health is often touted as a way to reduce long-term absenteeism due to illness. This relatively new movement includes promoting wellness or health management as a "more preventative and holistic method of tackling the problem [of absenteeism]" (Manocha 2004). Many employers now offer health promotion programs, such as employee assist-

ance, stress management, smoking cessation, fitness subsidies, and flu vaccinations, but few cost-benefit analyses have been done. Furthermore, since disability is tied to long-term absences, workplace and job accommodation may also help reduce the rate. In fact, the Conference Board of Canada found that employers engaging in health promotion as well as initiatives toward "psychosocial and physical work environments" are the most likely to see results in cost savings, improved productivity, and enhanced employee retention (Bachmann 2002).

### Perspectives

#### Notes

1 Although the trend lines show a decline for the two data sources, the overall rates are generally lower with SLID. Part of the reason is that the denominator (annual average number of paid workers) is slightly different and higher for SLID (see "Absence rate" in *Data sources and definitions*). For more information on this subject, see Noreau (1996).

2 The focus of this section is on employees who had at least one long-term absence. This total is smaller than the total number of absences because approximately 5% of workers had more than one long-term absence in the same year.

3 This finding is based on a relatively small sample size and should therefore be interpreted with some caution. However, it is consistent with findings from other similar studies.

4 To account for absences that may have spilled into 2003, only those that ended in 2002 were considered in this calculation. The low rate of full-year work for those with long-term absences is most likely because the majority took another absence in 2003 (see Chart C).

5 A variable on the SLID job file indicates whether the respondent had an absence of one week or longer (excluding paid vacation) in the year. Details of the absences are found on a separate file. Reasons for the absence of one week or longer found in chart C were not determined.

6 This rough calculation of \$8,800 is based on 440 hours of lost time (11 weeks x 5 days x 8 hours per day) multiplied by average hourly earnings of \$20.

7 Among the non-absence population, 16% reported receiving some EI during the past year, and 3% workers' compensation.

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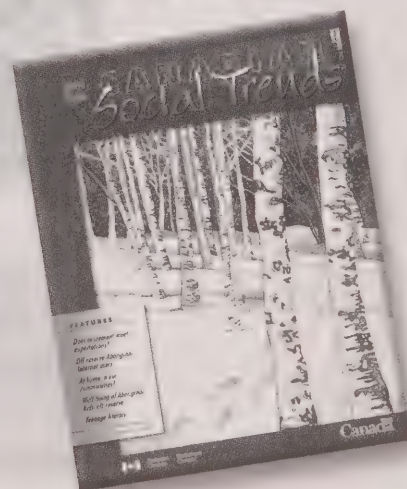
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# Screening job applicants

Ernest B. Akyeampong

Finding the right person for the job is the goal of every hiring decision. In most cases, a personal interview combined with a knowledge or skills test will be enough for both parties to see if they are compatible. However, for dangerous jobs or those where public safety or security is at stake, other screening practices may be involved. For example, a drug or alcohol test may be administered for airline pilots or truck drivers, a medical examination for firefighters or sports officiators, or a security check for positions that involve handling public money or maintaining information technology systems.

Despite general interest, very little is known statistically about the prevalence of some hiring practices. While information may be kept at the plant or firm level, it is not readily available to labour market researchers. Only recently have the first nationally comprehensive data become publicly available through Statistics Canada's Workplace and Employee Survey (WES) (see *Data source*). This article explores the prevalence and trends in the use of security checks, medical examinations, and drug tests in hiring, as well as variations by industry, occupation, workplace size, and selected worker characteristics.

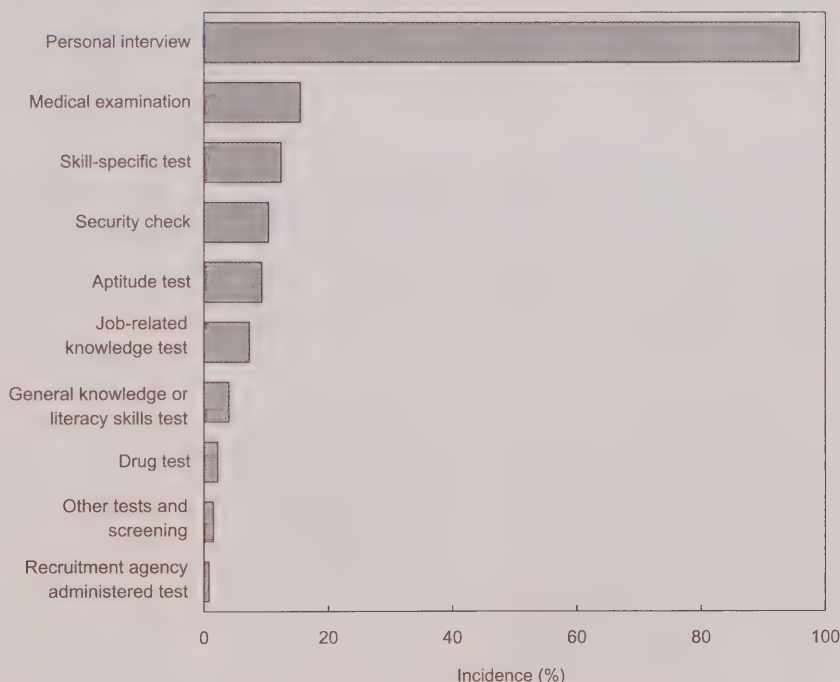
## An overview of hiring practices

The 11.7 million employees covered by WES in 2001 were asked what screening they had undergone

when first hired by their employer. Surprisingly, about 1 in 5 reported none. These 2.6 million employees are excluded in this article (see *A closer look at non-screened employees*).

Of the remaining 9.1 million respondents, who reported at least one form of screening, almost all (95.8%) underwent a personal interview prior to hiring (Chart A). Next in the ranking were medical examinations (15.5%), followed by skill-specific tests (12.4%) and security checks (10.4%). Drug tests (2.2%) placed eighth.

**Chart A** Virtually every new employee who underwent screening had a personal interview.



Source: Workplace and Employee Survey, 2001

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## Data source

The **Workplace and Employee Survey (WES)** began in 1999 as a joint program of Statistics Canada and Human Resources Development Canada. This longitudinal survey examines how employers and their employees respond to the changing competitive and technological environment. WES provides insight into the relationship between a firm's employment practices and its performance, as well as in-depth information on the effects of technology, training, and human resources practices. The survey is unique in that employers and employees are linked. Employees are selected from the sampled workplaces, making information from both available in a single framework.

The 2001 sample consisted of 6,200 establishments and 20,400 employees. Public administration, agriculture, fishing and trapping, and private households are excluded from WES. Public administration would undoubtedly have greatly raised the overall rate of security checks as a hiring tool.

Following extensive consultation with employers, union leaders, and human resource practitioners in the early 1990s, a list of 10 screening practices was selected. It is therefore possible that some past and more recent practices may have been missed.

To examine changes over time, employees in 2001 were divided according to when they were hired by their current employer: prior to the 1980s (382,000), during the 1980s (1,100,000), during the 1990s (4,664,000), or in 2000 or 2001 (2,959,000).

## A closer look at non-screened employees

At first it is puzzling that almost a quarter of employees did not go through any of the 10 identified screening practices—not even a personal interview—when first hired. How different were they from the other 9.1 million who underwent at least one form of screening?

The data reveal virtually no differences between the two groups in terms of demographics (sex or age), industry or occupation. The one significant difference was that the non-screened were twice as likely to be found in small workplaces (under 20 employees)—about 50% compared with only 25% of those who were screened. Presumably, small firms find screening costs prohibitive and therefore avoid using them. As well, nearly half of the non-screened workers had heard of the job opening from a family member or friend, and another 16% had been contacted directly by the employer. Also, many may have considered their personal interview to be informal and as such not worthy of being characterized as a screening process. Finally, there is the issue of recall. Many respondents may simply have forgotten undergoing any of the processes.

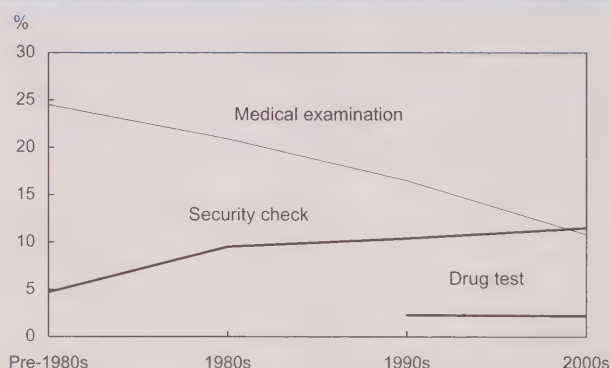
## Trends in security, medical and drug screening

Screening practices have changed over the years for a number of reasons. These include changes in the industry and occupation job mix; improvements in detecting health conditions and drug or alcohol abuse; and increased access to personal, financial, criminal, and other records. Changes in cultural norms may also have played a role. For example, more and better checking for drug use, especially among athletes, may be having its effects on the job world. Similarly, growing public awareness regarding abuse of women, the disabled, and especially children may have increased the need to scrutinize potential workers in direct contact with these and other groups.

Job evolution over the past several decades appears to have been mirrored in the screening practices used by employers. For example, in line with the decline in manufacturing and other physically demanding jobs, the use of medical examinations has fallen (Chart B). Also, with improved and safer machinery, certain jobs in manufacturing, construction and other primary industries no longer require the same physical demands, further reducing the need for medical examinations. Some 11% of the most recent hires were given a medical exam compared with about 25% of new hires prior to 1980.

In contrast, the growth in information technology jobs, which are relatively more susceptible to costly security breaches, has been accompanied by a steady rise in

**Chart B Medical examinations have declined, but security checks have increased.**



Source: Workplace and Employee Survey

security checks. Some 12% of the most recent hires underwent a security check compared with only 5% of pre-1980 new hires.

The use of drug tests, a rarity for workers hired prior to the 1990s, is inching up for some positions. This is due in large part to advancements in testing techniques as well as growing acceptance of the practice. Roughly 1 in 50 new hires in the 1990s and the 2000s were given this type of screening.

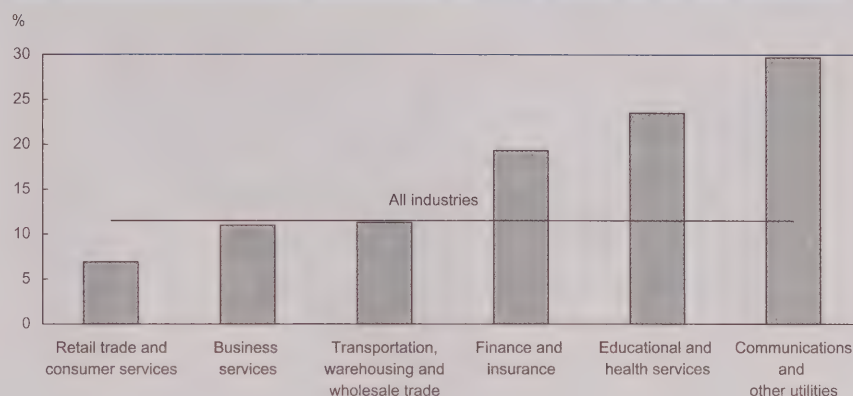
### Screening test incidence varies by job type

The likelihood of undergoing a medical exam, security check or drug test depends on many factors, principally industry and occupation as well as workplace size. (Job types with small sample sizes, and therefore high sampling variability, were omitted from this comparison.) Variations by sex and age are also briefly examined. Comparisons are based on the most recent hires: the three million workers initially hired in 2000 and 2001. The choice was made for several reasons. First, this group was least likely to have problems with recall. Second, their occupation, industry or workplace size was unlikely to have changed. Third, the large sample size of this cohort permits statistically meaningful comparisons to be made. Last, the hiring screening practices used for this cohort are the most currently relevant.

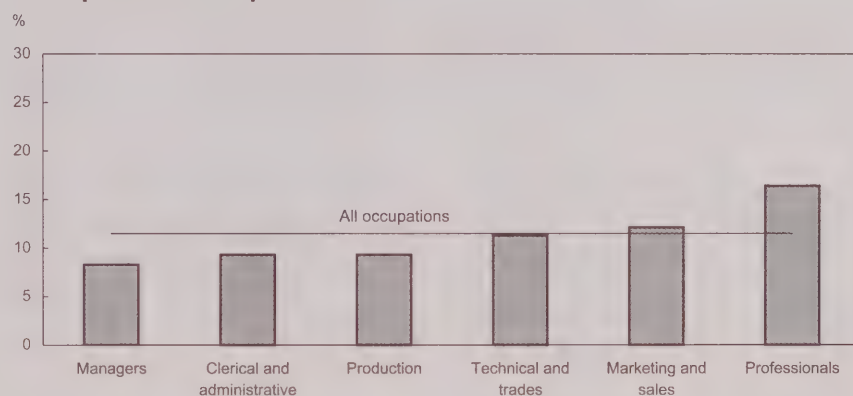
### Security checks

Security checks were most common for those seeking professional jobs, notably teachers and health workers. Law enforcement officers and information technology personnel also fall into this group. About 16% of people hired into

**Chart C Among those hired in 2000 and 2001, security checks were most common in communications and utilities...**



### ... for professional positions

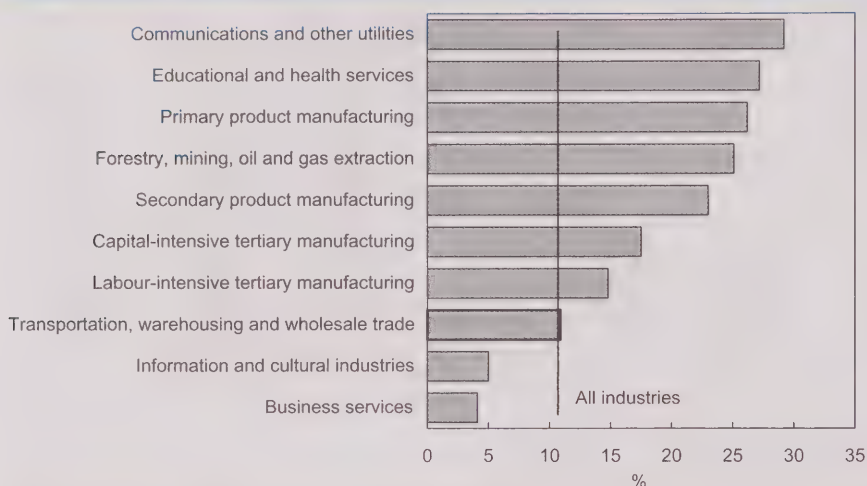


### ... and in large workplaces



Source: Workplace and Employee Survey, 2001



**Chart D Medical examinations were most common in communications, and education and health.**

Source: Workplace and Employee Survey, 2001

### Medical examinations

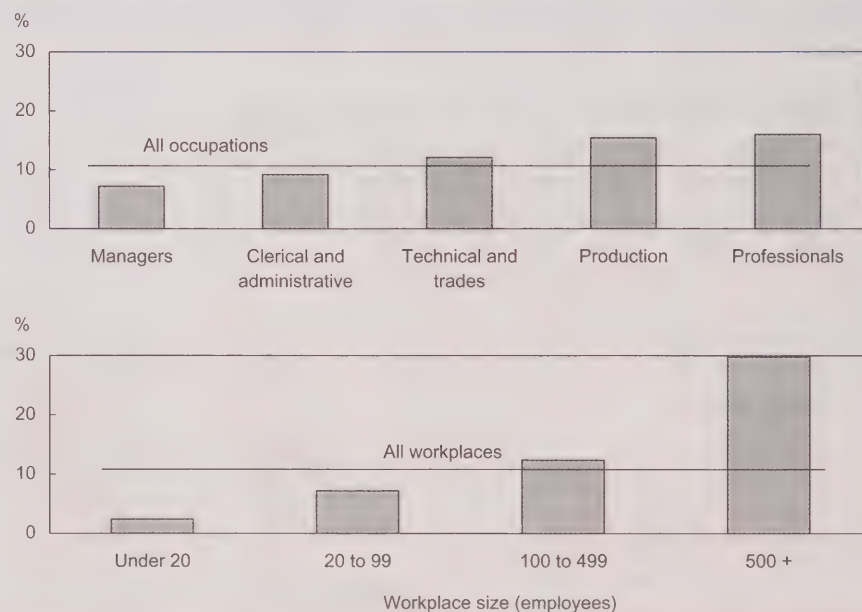
By industry, medical examinations were most common in communications and other utilities (29%), education and health (27%), and primary and secondary manufacturing (about 25% each) (Chart D). The financial and other disruptive consequences associated with illness-related absences in some of these industries can be quite substantial. Medical exams were least common in business services (4%).

Medical examinations were most common for professional occupations (including teachers and health workers, 16%) (Chart E). Slightly higher than average rates were also seen for more physically demanding production, technical and trades jobs.

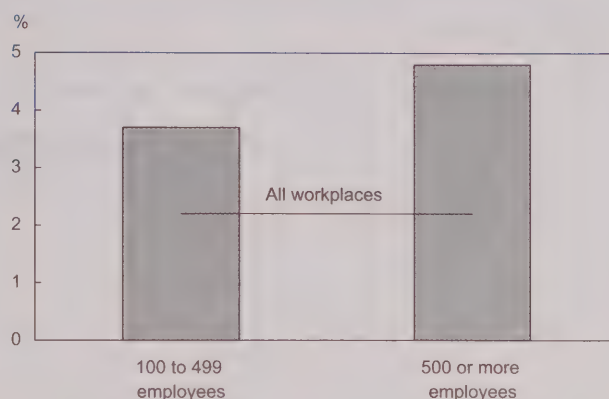
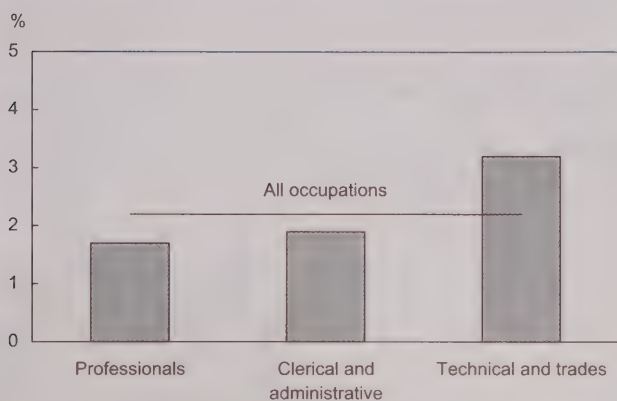
such positions in 2000 and 2001 underwent security screening (Chart C). A slightly higher than average proportion of persons hired into marketing and sales positions (12%) also went through the process. Those hired into managerial (8%), and clerical/administrative and production jobs (9%) were least often subjected to a security check.

Among the major industries, use was highest in communications and other utilities (30%), education and health (24%), and finance and insurance (19%). It was lowest in retail trade and consumer services (7%).

Security screening also increased with workplace size. The largest workplaces (500 or more employees), who were likely best able to afford the practice, screened 18% of their new hires in 2000 and 2001. The rate for small workplaces (less than 20) was just 8%.

**Chart E Seekers of professional, production, and technical and trades jobs, as well as jobs in large firms, were more likely to undergo a medical exam.**

Source: Workplace and Employee Survey, 2001

**Chart F Drug tests were most common for technical and trades jobs...****...and jobs in large workplaces.**

Source: Workplace and Employee Survey, 2001

Use also increased with workplace size, the process being used for 30% of new hires in large workplaces (likely more able to finance them), as opposed to only 2% in small workplaces.

### Drug tests

Compared with security checks (11.5%) and medical exams (10.8%), the use of drug tests for 2000 and 2001 new hires was minimal (just 2.2%) (Chart F). However, a higher than average number were carried out in primary product manufacturing industries (9.0%), for technical and trades positions (3.2%), and in large workplaces (3.7% in those with 100 to 499 employees, 4.8% in those with 500 or more).

### Differences by sex and age

No significant differences were seen in the use of the three screening practices by sex or age, with a few notable exceptions. Young new hires (15 to 24, and more likely

to be hired into part-time or less sensitive positions) were given either a security check or a medical examination less often than the average. New hires aged 45 to 54 were relatively more likely to have to take a medical examination, while those aged 25 to 44 were more likely to be given a drug test.

### Multiple screening tests not common

The chances of a person undergoing more than one of the three non-knowledge-based screening tests was very low. Of the three million new hires in 2000 and 2001, just under 1% (27,000) underwent all three tests. Approximately 4% (107,000) were given two tests, with medical and security, the most popular combination, being a requirement for 75,000 of them. Persons hired into professional occupations (for example, teachers, health workers) and communications and other utilities industries were most likely to be given these two tests.

### Conclusion

Personal interviews and job-related skill or knowledge tests are routine in many hirings. But other practices such as medical examinations, security checks and, lately, drug tests are also frequently required in specific situations.

Over the years, the use of medical examinations as a screening tool has become less prevalent, while security checks have risen steadily. Pre-1980 new hires were five times more likely to undergo a medical examination than a security check (the rates were 25% and 5% respectively). In contrast, new hires in 2000 and 2001 were slightly more likely to undergo a security check (12%) than a medical examination (11%).

Medical examinations continue to feature prominently for the more physically demanding jobs, such as those found in primary and secondary product manufacturing. Medical exams as well as security



checks are especially common today for persons hired into professional jobs (such as teaching and health), law enforcement, and the telecommunications area. It is also safe to assume that in the post 9/11 environment, the use of security checks to screen new hires will likely increase.

Drug tests, rarely used for screening before 1990, are now required for roughly 1 in 50 employees being hired. Continuing improvements in drug screening technology will likely lead to further growth of this tool in the future.

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# Unemployment since 1971

René Morissette and Feng Hou

With headlines trumpeting a 30-year low in the national unemployment rate and increasing numbers of stories highlighting labour shortages in economic hot spots, it's easy to get the impression that the labour market has never been better. But from a demographic perspective, things should be even rosier. Employment and earnings tend to increase with both education and experience, and today's labour force is more experienced and educated than ever before. Education levels have risen with the increasing credentials of labour market entrants, while the aging of the workforce has shifted the experience profile upwards. For a better perspective on long-term trends, one should account for these factors by looking at specific age-education combinations.

This article uses the Census of Population to compare unemployment rates from 1971 to 2001 for individuals aged 25 to 64, based on consistent measures of educational attainment. More recent trends from 2001 to 2005 are examined using the Labour Force Survey (see *Data sources and definitions*). These groupings yield a more nuanced long-term perspective on current labour market conditions.

## The changing profile of the Canadian workforce

Along with the population in general, Canada's labour force has become older and more educated. In 1971, 16% of Canadian-born workers were aged 25 to 34 and had less than a high school diploma (Table 1). Thirty years later, the proportion was just 4%. In tandem, the percentage aged 35 to 44 with a university degree grew from 2% to 6%. Nevertheless, the unemployment rate for Canadian-born individuals in 2001 was slightly higher than in 1971 (Chart A).

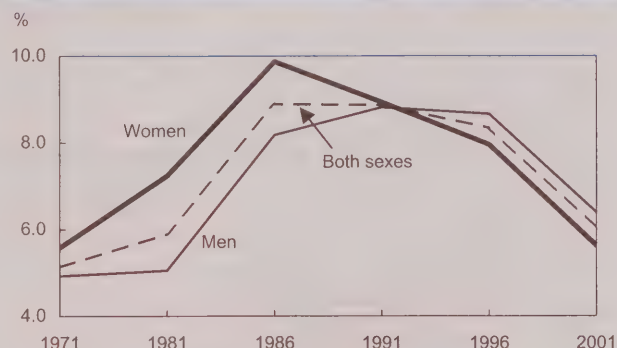
*The authors are with the Business and Labour Market Analysis Division. René Morissette can be reached at (613) 951-3608 or [rené.morissette@statcan.ca](mailto:rené.morissette@statcan.ca). Feng Hou can be reached at (613) 951-4337 or [feng.hou@statcan.ca](mailto:feng.hou@statcan.ca).*

A breakdown of the figures shows that in 1971 about 8% of all native-born Canadians aged 25 to 34 in the labour force who had not completed high school were unemployed; in 2001, the percentage was roughly 14%.<sup>1</sup> Similarly, the unemployment rate of their counterparts aged 35 to 44 rose from 6% to 10%. While the magnitude declined for each of the next two age groups, the increase was still almost 3 percentage points for those 55 to 64.

Similar patterns were observed among high school graduates, although their unemployment rates rose to a lesser extent. In this group, those aged 25 to 34, 35 to 44, and 45 to 54 experienced increases of about 4, 3 and 2 percentage points respectively.

Educated workers did not avoid this long-term increase either. University graduates aged 25 to 34, 35 to 44, and 55 to 64 saw their unemployment rise by almost 2 points during the period. In sum, whatever their age and education level, Canadian-born labour market participants aged 25 to 64 had higher rates of unemployment in 2001 than 30 years earlier.

**Chart A** Unemployment rates of the native-born aged 25 to 64 were higher in 2001 than in 1971.



Source: Census of Population



### Data sources and definitions

This study uses the one-third sample file of the 1971 Census, the 20% sample files of the 1981, 1986, 1991, 1996, and 2001 Censuses, and the May and June files of the 2001 and 2005 Labour Force Survey. The sample selected consists of individuals aged 25 to 64 who were either employed or unemployed in the week prior to the Census or in the LFS reference week. Individuals aged 15 to 24 were excluded because those attending school full time cannot be identified in some years. Institutional residents and persons living in the Northwest Territories, the Yukon Territory and Nunavut were also excluded.

Unemployment rates for 1981 to 2001 are comparable. However, the concept of unemployment used in 1971 included some employees who were absent from work during the Census reference week, and some who were employed in 1970 or 1971 but were not looking for work. As a result, the 1971 unemployment rates are biased upwards. Therefore, the long-term rise in unemployment rates within age and education cells would actually be larger if consistent concepts were used.

When using Census data, the four education levels presented are based on the highest grade or year of elementary or secondary school attended, or the highest year of university or other non-university education completed. The attainment of a degree, certificate or diploma is considered to be at a higher level than years completed or attended without an educational qualification. **Less than high school** refers to individuals who did not obtain a high school diploma. **High school** includes those who graduated from high school, those who obtained a trades certificate or diploma, and those who attended other non-university education without obtaining a certificate or diploma. **Some postsecondary** includes those who obtained a certificate or diploma through other non-university education, and those who finished some years of university education but did not obtain a degree. **University degree** applies to individuals with a bachelor's degree or higher.

**Table 1 Canadian-born labour market participants by age and education**

	1971	1981	1986	1991	1996	2001
	%					
<b>Total 25 to 64</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>25 to 34</b>						
Less than high school	16.1	10.2	10.3	7.8	5.2	3.5
High school	7.5	10.9	11.3	11.0	8.4	6.1
Some postsecondary	5.7	13.2	13.4	13.2	12.4	11.0
University degree	3.2	6.5	6.4	6.2	6.6	6.6
<b>35 to 44</b>						
Less than high school	17.6	9.6	8.6	7.3	6.9	6.1
High school	4.6	6.0	7.1	9.2	9.9	9.4
Some postsecondary	3.3	7.3	9.1	10.5	12.2	12.9
University degree	1.8	3.3	4.7	5.6	5.9	6.1
<b>45 to 54</b>						
Less than high school	16.8	10.2	8.1	6.6	5.8	5.5
High school	3.9	4.2	4.0	5.1	6.2	7.5
Some postsecondary	2.5	4.1	4.2	5.2	7.3	9.3
University degree	1.4	1.6	1.9	2.7	4.2	5.2
<b>55 to 64</b>						
Less than high school	11.2	7.4	6.0	4.6	3.7	3.5
High school	2.2	2.5	2.2	2.3	2.2	2.6
Some postsecondary	1.4	2.3	2.0	1.9	2.2	3.0
University degree	0.7	0.9	0.9	0.9	1.1	1.6

*Note: High school also includes trades certificate or diploma.*

*Source: Census of Population*

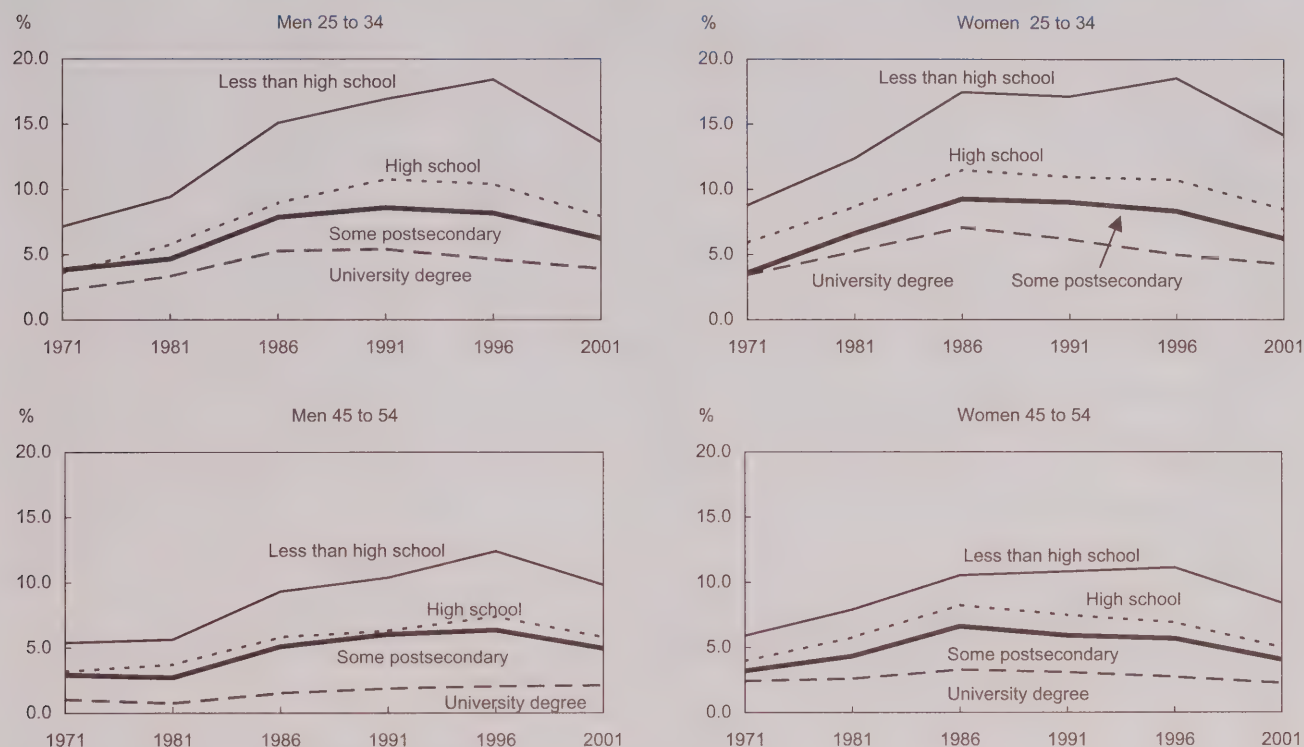
### Unemployment rates of Canadian-born men and women

For most groups of Canadian-born men and women, unemployment rates have trended upwards over the last three decades (Chart B). While unemployment rose substantially for all those who had not completed high school, the increases were more pronounced among men. For instance, the unemployment rate of men aged 35 to 44 without a high school diploma rose fully 5 percentage points, compared with about 3.5 points for women. Regardless of age and educational category, Canadian-born men aged 25 and over had higher unemployment rates in 2001 than in 1971. The same was true for virtually all groups of Canadian-born women.

### Unemployment rates of immigrant men and women

Immigrants experienced similar changes. As with their Canadian-born counterparts, virtually all groups of immigrants (of a given age and education level) saw their unemployment rate rise between 1971 and 2001.

**Chart B Most groups of Canadian-born men and women had higher unemployment rates in 2001 than in 1971.**



Source: Census of Population

Once again, unemployment grew more among the less-educated. For instance, both men and women aged 25 to 34 and with no high school diploma experienced roughly a 4-percentage point increase in their unemployment rates (Chart C).

University degree holders, especially men, were not immune either. The unemployment rate of immigrant men aged 25 to 54 rose 1 to 3 percentage points while the women's rate rose 1 to 2 points.

In 1971, unemployment for immigrant male university graduates aged 35 to 54 was half the rate of their counterparts with no high school diploma. Thirty years later, the relative differences across education levels were much less pronounced. In fact, while the unemployment rate of immigrant men aged 45 to 54 who had not completed high school rose by about 1 per-

centage point between 1971 and 2001, it rose 2.5 points among those with a university degree. However, an opposite pattern was found among younger men aged 25 to 34.

### Recent trends

According to the Labour Force Survey, employment in blue-collar jobs grew substantially between 2000 and 2004 (Cross 2005). Did this growth reflect favourably on the unemployment rates of less-educated workers?<sup>2</sup>

For women in all age groups except 45 to 54, those who did not complete high school saw no improvement in their unemployment rates between 2001 and 2005 (Table 2). Among women with a high school diploma, none enjoyed a sizeable decrease in their rate.



**Table 2 Growth in unemployment rates by age and education**

	Men		Women	
	1971-2001	2001-2005	1971-2001	2001-2005
	% point change			
<b>Total 25 to 64</b>	<b>1.4</b>	<b>-0.7</b>	<b>0.1</b>	<b>-0.1</b>
<b>25 to 34</b>				
Less than high school	6.0	1.0	5.1	0.7
High school	4.1	-1.0	2.6	-0.4
Some postsecondary	2.1	-0.3	2.4	-0.6
University degree	1.7	-0.9	0.8	1.1
<b>35 to 44</b>				
Less than high school	4.6	-2.0	3.2	0.8
High school	3.1	-1.0	1.3	0.8
Some postsecondary	2.1	0.3	1.3	-0.8
University degree	2.1	0.1	0.4	0.1
<b>45 to 54</b>				
Less than high school	3.7	-1.8	2.1	-1.2
High school	2.3	-0.4	0.9	-0.2
Some postsecondary	1.7	0.0	0.5	0.1
University degree	1.6	0.5	0.1	0.1
<b>55 to 64</b>				
Less than high school	2.9	-1.4	0.9	3.2
High school	2.5	-0.6	1.1	1.8
Some postsecondary	2.1	0.0	1.4	-0.7
University degree	1.6	-1.4	1.4	-1.7

Note: High school also includes trades certificate or diploma.

Sources: Census of Population, 1971 to 2001; Labour Force Survey, May and June 2001 and 2005

Male high school graduates 25 and over also benefited from the recent expansion in blue-collar jobs. However, their unemployment rates never fell by more than 1 percentage point between 2001 and 2005. This moderate improvement left their unemployment rates 2 to 3 percentage points higher in 2005 than in 1971, depending on their age. For instance, high school graduates 25 to 34 saw their rate rise by 3 points during this period.

In sum, while the recent expansion in blue-collar employment improved the employment prospects of less-educated men, the recent reduction in their unemployment rates never fully offset the previous increases observed from 1971 to 2001. As a result, less-educated workers of both sexes saw their unemployment rates rise over the 1971-to-2005 period.<sup>3</sup>

Thus, women with low levels of education benefited very little from the recent growth in blue-collar jobs. Over the full 1971-to-2005 period, unemployment rates among women aged 25 and over with less than a high school diploma rose by 1 to 6 percentage points.

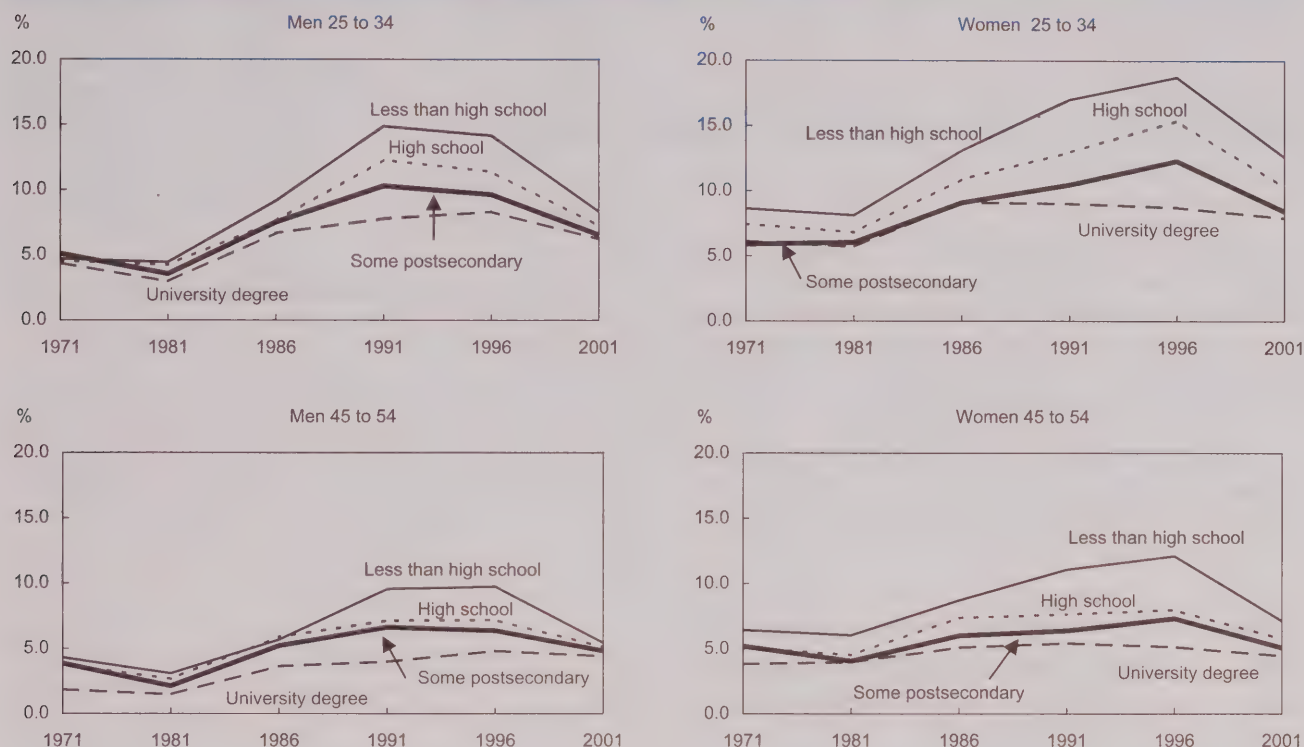
Among men with less education, unemployment rates improved to a greater extent. For example, men 35 and over with no high school diploma saw their rate drop by up to 2 percentage points between 2001 and 2005. However, this improvement was not sufficient to fully offset the rise during the 1971-to-2001 period. As a result, men of all ages who did not complete high school saw their unemployment rates rise between roughly 2 and 7 percentage points over the 35-year period.

**Table 3 Growth in employment rates by age and education**

	Men		Women	
	1971-2001	2001-2005	1971-2001	2001-2005
	% point change			
<b>Total 25 to 64</b>	<b>-4.4</b>	<b>1.2</b>	<b>29.4</b>	<b>2.4</b>
<b>25 to 34</b>				
Less than high school	-9.7	-1.0	19.8	0.7
High school	-7.3	0.9	22.0	-0.2
Some postsecondary	-3.4	0.2	23.7	2.5
University degree	-3.0	-0.4	20.1	-0.5
<b>35 to 44</b>				
Less than high school	-8.8	1.5	24.8	0.5
High school	-6.2	2.0	27.3	-0.1
Some postsecondary	-4.2	-0.2	28.4	1.3
University degree	-4.3	0.6	25.4	-0.7
<b>45 to 54</b>				
Less than high school	-9.2	3.1	19.6	2.4
High school	-6.9	0.7	21.5	4.3
Some postsecondary	-5.1	0.3	22.1	0.9
University degree	-5.1	-0.6	20.6	0.5
<b>55 to 64</b>				
Less than high school	-20.9	8.6	2.3	5.8
High school	-22.3	3.8	0.9	7.4
Some postsecondary	-19.6	9.0	1.6	7.5
University degree	-20.0	2.7	-1.4	5.9

Note: High school also includes trades certificate or diploma.

Sources: Census of Population, 1971 to 2001; Labour Force Survey, May and June 2001 and 2005

**Chart C Immigrants showed similar patterns in unemployment rates to the Canadian-born.**

Source: Census of Population

## Employment rates

Looking only at unemployment rates may not give a full picture of the labour market. Even though unemployment rates have trended upwards for some groups since the early 1970s, their participation rates may also have increased, resulting in higher employment rates.<sup>4</sup>

This is the case for women aged 25 to 54. Whatever age and education breakdowns are considered, their employment rates increased by at least 20 percentage points between 1971 and 2001 (Table 3), changing only marginally between 2001 and 2005. As a result, women in this age group who did not complete high school experienced an increase in both unemployment and employment rates.

The story was different for men 25 to 54. Those with a high school diploma or less saw their employment rates fall by 6 to 10 percentage points between 1971 and 2001 and increase by at most 3 percentage points between 2001 and 2005. For these men, employment opportunities, whether measured by employment rates or unemployment rates, worsened over the 1971-to-2005 period.

Partly as a result of a trend toward earlier retirement, employment rates for men aged 55 to 64 fell at least 20 percentage points between 1971 and 2001.<sup>5</sup> However, from 2001 to 2005, employment rates rose between 3 and 9 percentage points.

In sum, while women's employment rates rose for all age and education groups between 1971 and 2005, men's employment rates fell.



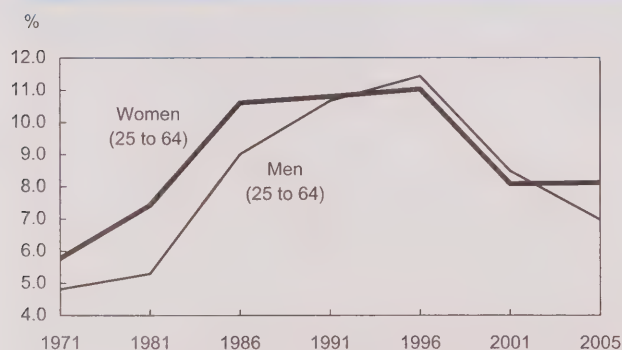
## Conclusion

Given that the unemployment rate for those aged 25 to 64 has been around 6% in recent years, a level comparable to the early to mid-1970s, some may think that workers of a given age and education level face no greater chances of being unemployed today than their counterparts 30 years ago. In reality, most labour market participants, especially those with low education levels, are more likely to be unemployed today than in the early 1970s.

For men aged 25 to 34 who did not complete high school, the unemployment rate increased by fully 7 percentage points between 1971 and 2005. For those with a high school diploma, the rise was 3 points. At the other end of the spectrum, male university graduates of that age saw a rise of only 1 point.

Among women aged 25 to 34 with no high school diploma, unemployment grew by 6 percentage points between 1971 and 2005. For those better educated, rates rose by roughly 2 points.

**Chart D Unemployment rates standardized for age and education showed greater increases from 1971 to 2005.<sup>1</sup>**



<sup>1</sup> Unemployment rates are derived by holding the distribution of labour market participants by age and education to 1971 values.

Sources: Census of Population, 1971 to 2001; Labour Force Survey, May and June 2005

Because these increases in unemployment occurred while the Canadian labour force was becoming increasingly educated and experienced, the overall unemployment rate did not trend upwards over the last three decades. However, had these changes in the educational attainment and age structure of the labour force not taken place, unemployment rates of both men and women would have risen, all else equal, between 1971 and 2005 (Chart D). For those in the labour market today, the chances of being unemployed are worse than they were for their counterparts in the early 1970s.

## Perspectives

### Notes

- 1 Detailed tables are available from the author.
- 2 Since the Labour Force Survey contains no information on immigration status, changes in unemployment rates over the 1971-to-2005 period are presented for a sample that includes both immigrants and the native-born. The 1971-to-2001 period uses the Census while the 2001-to-2005 period is based on the Labour Force Survey.
- 3 Of all 40 sex-age-education combinations considered, only female university graduates aged 55 to 64 experienced a net decrease in their unemployment rate over the 1971-to-2005 period.
- 4 Employment rates refer to the proportion of individuals of working age who are employed.
- 5 The overall decline for this age group amounted to 16 percentage points. It was smaller than the decline observed within educational groups because (a) men aged 55 to 64 increased their educational attainment during that period and (b) employment rates rise with education.

### Reference

Cross, Philip. 2005. "Recent changes in the labour market." *Canadian Economic Observer* (Statistics Canada, catalogue 11-010-XIB) 18, no. 3 (March): 3.1-3.10.

# What's new?

## *Recent reports and studies*

### ■ FROM STATISTICS CANADA

#### ■ *Science and engineering employment in Canada and the United States*

Although Canada may lag behind the United States in terms of domestic expenditures on research and development, proportionally, scientists and engineers are just as prevalent here as they are south of the border.

In 2000 and 2001, scientists and engineers together accounted for 4.5% of paid employment in both countries. This proportion nearly doubled in both nations during the previous two decades. In 1980 and 1981, scientists and engineers represented 2.3% of paid workers in Canada, and 2.6% in the United States.

In 2000 and 2001, scientists and engineers accounted for a slightly higher share of paid earnings in the United States than in Canada. Scientists and engineers accounted for 8.5% of paid earnings in the United States, compared with 7.7% in Canada.

Canada's system of innovation is sometimes characterized as 'disadvantaged' because Canadian businesses devote proportionately fewer resources to research and development than do businesses elsewhere, particularly in the United States.

However, the intensity of research and development is only one measure of an economy's innovative capacity. Scientists and engineers have long been regarded as important to innovation and technological progress.

For more information, see the May 4, 2006 issue of *The Daily* on the Statistics Canada's Web site ([www.statcan.ca](http://www.statcan.ca)).

#### ■ *Students in the labour market*

Employment rates for students, both during summer and throughout the school year, have improved during the past eight years. But in 2005, they

were still far below the peak levels reached during the heydays of the late 1980s.

The summer job market has grown at a far slower pace in recent years than the job market for students who held jobs during the school year.

In the summer of 2005, the employment rate for students who were planning to return to their studies in the fall averaged 51.7%. This was a moderate gain of 4.8 percentage points from 46.9% in the summer of 1998, when the student job market started to trend up.

During the 2004/2005 academic year, students had an average employment rate of 38.9%, up 7.0 percentage points from the 1997/1998 school year.

Employment rates in both cases were below peaks just prior to the 1991 recession, especially during the summer months. In the summer of 1989, 61.4% of students on average were employed. During the 1989/1990 academic year, the proportion was 41.7%.

Booming Alberta led the nation in terms of employment rates among full-time students who combined work and school. About 44.3% of full-time students in Alberta were employed during the 2004/2005 school year, compared with only 23.0% in Newfoundland and Labrador.

For more information, see the April 27, 2006 issue of *The Daily* on the Statistics Canada's Web site ([www.statcan.ca](http://www.statcan.ca)).

#### ■ *Electronic commerce and technology*

Online sales recorded their fourth consecutive year of strong double-digit growth in 2005, but e-commerce still accounted for just over 1% of total operating revenues for private firms.

Combined private- and public-sector online sales increased 38.4% to \$39.2 billion. Online sales by private firms increased 37.2% to \$36.3 billion, while those by the public sector increased 55.4% to \$2.9 billion.



This was the fourth year in a row that the overall value of e-commerce sales in Canada increased by 38% or more. To put this into perspective, the increase in online sales was six times the rise in overall retail sales in Canada in 2005.

Large firms, those with over 100 employees, continue to make the majority of online sales, accounting for 62% of total online sales. In addition, 16% of large firms sell online, compared with only 7% of private firms overall.

The robust growth in the value of online sales was in stark contrast to stagnation in the adoption of basic information and communication technologies.

For example, in 2005, 82% of all private-sector firms used the Internet, unchanged from the previous year. About 38% had a Web site, up only slightly from 37%.

This stability suggests that these basic technologies have reached at least a temporary saturation point in the Canadian market, much like the use of personal computers a couple of years earlier. In effect, Canadian businesses have crossed the digital divide and now have the capability to engage in e-business activities.

For more information, see the April 20, 2006 issue of *The Daily* on the Statistics Canada's Web site ([www.statcan.ca](http://www.statcan.ca)).

### ■ *The year in review: The revenge of the old economy*

Canada's economy is undergoing rapid and profound changes, and not just between booming resources and construction and declines in some manufacturing industries. The energy sector is developing new sources, while manufacturing itself is being buoyed by the strength in resources and investment demand. And all sectors have to deal with a shift in trade flows to Asia.

Prices in commodity markets rose sharply for a third straight year, initially led by energy and more recently by mining products. These increases were reflected in higher stock prices and the exchange rate. This encouraged more investment, which late last year passed household spending as the engine of growth.

Not all sectors profited equally from these changes. Some manufacturers were squeezed by the combination of soaring input costs and the rising loonie, notably forestry and clothing.

But overall, 62% of industries boosted output last year, little changed from 64% in 2004 and above the long-term average of 59%. As a result, the economy was increasingly pushing against its capacity limits, especially in Western Canada.

Some trends remained unchanged. Inflation stayed low, keeping interest rates near their historic lows. And old habits were hard to break: Canadians continued to buy trucks and sport utility vehicles in increasing numbers, and energy consumption grew despite high prices.

For more information, see the April 13, 2006 issue of *The Daily* on the Statistics Canada's Web site ([www.statcan.ca](http://www.statcan.ca)).

### ■ *Productivity spillovers from foreign-controlled suppliers in manufacturing*

The presence of foreign-controlled suppliers, especially those operating in science industries, can lead to faster productivity growth for Canadian producers located in downstream sectors.

The presence of foreign-controlled plants operating in 'upstream' industries (those that supply products and services) improves the productivity performance of Canadian producers in 'downstream' sectors, that is, sectors that rely heavily on inputs from these supplier industries.

The benefits are particularly important for domestic producers that buy inputs from science-based industries, such as producers of machinery and equipment, electronics and chemicals.

For more information, see the April 13, 2006 issue of *The Daily* on the Statistics Canada's Web site ([www.statcan.ca](http://www.statcan.ca)).

### ■ *Low income*

Only 3.3% of Canadians who were above Statistics Canada's low-income cut-off in 2003 slipped into low income in 2004. This was a much lower rate than a decade earlier. About 5.5% fell into low income between 1993 and 1994. By 1998, the proportion of those entering low income dropped below 4%.

At the same time, one-third (34%) of individuals climbed out of low income between 2003 and 2004. In 1994, the proportion of individuals who exited low income was only about 28%.

In 2004, about 3.5 million people were living in low income, down 1.1 million from the peak in 1996.

Low income is not a permanent state for most Canadians who face it. About 20% of the population experienced low income for at least one year between 1999 and 2004. However, only 2% lived in low income throughout this period, whereas almost 4% lived continuously in low income between 1993 and 1998.

For more information, see the April 6, 2006 issue of *The Daily* on the Statistics Canada's Web site ([www.statcan.ca](http://www.statcan.ca)).

### ■ *The dynamics of overqualification*

About one in five people in the workforce with a university education were overqualified for their job at some point during 2001. That is, they worked in a job that required at most high school education.

Younger workers were more likely to be overqualified, as were immigrants and people who had studied commerce or arts and humanities in school. The overqualified were most likely to work in the retail or wholesale trade sector.

On the other hand, the higher the university certification, the less likely workers were to experience a job requiring at most high school education. Others who were less susceptible included unionized workers, those working on a full-time basis, and people who had studied sciences or health.

The number of university-educated workers who were overqualified increased by nearly one-third between 1993 and 2001. An estimated 331,100 workers experienced this situation at some point in 2001, up from 251,600 in 1993.

For more information, see the April 6, 2006 issue of *The Daily* on the Statistics Canada's Web site ([www.statcan.ca](http://www.statcan.ca)).

### ■ *Income of Canadians*

Families with two or more people had an estimated median after-tax income of \$54,100, up about 2% from 2003 in real terms.

The increase in after-tax income was not shared by all family types, however. Among senior families (main income earner aged 65 and over) median after-tax income remained virtually unchanged at \$38,500. However, it was up 12% in real terms compared with 1996.

It was also virtually unchanged among unattached individuals whose median after-tax income amounted to \$21,300, and among female lone-parent families (\$27,700).

The proportion of families living below Statistics Canada's low-income cut-off declined in 2004, reflecting the strong economic conditions.

An estimated 684,000 families were living in low income in 2004, 7.8% of all families. Some 865,000 children under 18 were in low-income families, 12.8% of the total.

Families and singles earned the lion's share of their total (pre-tax) income from market income (employment earnings, investment income and private retirement income). For families of two or more people, median market income rose about 2% to \$55,800.

In 2004, market income made up nearly \$90 out of every \$100 of income before taxes. The remainder came from government transfers.

Among non-senior families, earnings made up the largest share of income before taxes. For every \$100 of total income, non-senior families received \$93 from market income (\$85 from earnings, \$3 from investment income, \$3 from private pensions and \$2 from other income.)

Median market income for non-senior families in 2004 was \$62,800, up 2.8% from 2003. Increases in employment and the number of full-time jobs contributed to this gain.

For more information, see the March 30, 2006 issue of *The Daily* on the Statistics Canada's Web site ([www.statcan.ca](http://www.statcan.ca)).

### ■ *Work hours instability*

Work hours instability was a fact of life for many Canadians between 1997 and 2001.

Almost one in three workers (32%) had a 'standard,' full-year full-time job in every year between 1997 and 2001.

A long work year is defined as more than 2,400 hours (46 or more hours per week for 52 weeks). A standard work year was one with between 1,750 and 2,400 work hours.

While it was common to work a long work year in a given year, it was rare to work chronically long hours. One in five workers had at least one long work year



between 1997 and 2001, but less than 1% had a long work year each year. Some 15% worked a short work year in each year and the remaining 52% shifted between these categories.

The traditional model where people work the same hours year after year applies to a relatively small share of workers. Only 20% of men and 15% of women worked the exact same hours in each year from 1997 and 2001.

For more information, see the March 29, 2006 issue of *The Daily* on the Statistics Canada's Web site ([www.statcan.ca](http://www.statcan.ca)).

### ■ *New frontiers of research on retirement*

The baby-boom generation, the vanguard of whom turn 60 this year, has caused fundamental changes in every social institution it has touched. Retirement will be no exception.

The behaviour of baby-boomer women will greatly influence what retirement in Canada looks like in the future. Women are much more likely than men to see retirement as involving more than just getting a pension or stopping paid work.

Also, joint retirement is becoming an issue for many couples. The growing number of women with substantial pension benefits is having a major impact on decisions about retirement. For more and more couples, decision-making is becoming much more complex.

Maintaining a standard of living in retirement is also becoming an issue. Amid growing uncertainty about their future financial security, increasing numbers do not know when they will retire. Others have simply delayed their retirement.

Retirement paths will become more and more flexible as some workers opt for self-employment. With a massive wave of retirement looming among baby boomers, the labour supply from older workers will grow in importance. Many will likely choose to become self-employed, making flexible retirement paths more prevalent.

For more information, see the March 27, 2006 issue of *The Daily* on the Statistics Canada's Web site ([www.statcan.ca](http://www.statcan.ca)).

### ■ *Immigrants who leave Canada*

A substantial part of migration to Canada is not necessarily permanent, with about a third of male immigrants (aged 25 to 45 at the time of landing) experiencing out-migration within 20 years after arrival. More than half of those who leave do so within the first year of arrival.

In addition, the business cycle had a strong impact. For example, the groups who arrived when the economy was relatively weak during the recession of 1990/91 had higher departure rates.

Profiles of residence in Canada, indicated by income tax return filing, varied across source countries and immigrant classes. Emigration rates were especially high for source countries such as the United States and Hong Kong, and for those admitted under the skilled worker or business classes.

For more information, see the March 1, 2006 issue of *The Daily* on the Statistics Canada's Web site ([www.statcan.ca](http://www.statcan.ca)).

## ■ FROM OTHER ORGANIZATIONS

### ■ *Employee screening: theory and evidence*

Employers making greater use of systems such as teamwork, where monitoring is more difficult, screen applicants more intensively for work ethic. This screening is also associated with higher productivity and higher wages and benefits. Reduced monitoring costs and high-performance work systems may enable the firm to pay higher wages to attract and retain such workers. Screening for other attributes, such as cognitive ability, does not produce these results. See "Employee screening: Theory and evidence" by Fali Huang and Peter Cappelli, National Bureau of Economic Research, working paper 12071 (<http://www.nber.org/papers/w12071>), March 2006, 34 p.

### ■ *Socio-economic influences on the health of older Canadians*

Two longitudinal surveys, the Survey of Labour and Income Dynamics and the National Population Health Survey, are used to examine the link from socio-economic status (SES) to health (as opposed to the

health-to-SES link). For people 50 and older who are initially in good health, the study looks at whether changes in health status over the next two to four years are related to prior SES, as represented by income and education. Although the two surveys were designed for different purposes and had different questions for income and health, the evidence they yield with respect to the probability of remaining in good health is similar. Both suggest that SES does play a role and that the differences across SES groups are quantitatively significant, increase with age, and are much the same for men and women. See "Socio-economic influences on the health of older Canadians: Estimates based on two longitudinal surveys" by Neil J. Buckley, Frank T. Denton, A. Leslie Robb and Byron G. Spencer, *Canadian Public Policy*, March 2006, Vol. 32, no. 1, pp. 59-83.

### ■ *Distance to school and university participation*

Students who grow up near a university may avoid moving and added living costs by commuting from home to attend the local university. The distance between the homes of high school students and the nearest university is calculated by combining household survey data and a database of Canadian university postal codes. Students living 'out of commuting distance' are far less likely to attend university than students living 'within commuting distance'. Students from lower-income families are particularly disadvantaged by distance. See "Too far to go on? Distance to school and university participation" by Marc Frenette, *Education Economics*, March 2006, Vol. 14, no. 1, pp. 31-58.

### ■ *Male-female wage differentials*

This paper outlines the main empirical procedures that are used to document the male-female wage differential and the extent to which it reflects discrimination. It then discusses the evidence on male-female wage differentials—their existence, the extent to which they reflect discrimination, their changes over time and the factors that influence the gap. Particular attention is paid to more recent studies that control for a wider range of conventionally unobserved factors. See "Viewpoint: Male-female wage differentials: how can that be?" by Morley Gunderson, *Canadian Journal of Economics*, February 2006, Vol. 39, no. 1, pp. 1-21.

### ■ *Wage inequality and overeducation*

The existence and persistence of 'overeducation' can be explained by an extension of the efficiency wage model. When calibrated to fit the overeducation found in most empirical studies, the model implies that both the relative wage and the relative employment of high-skill workers depend inversely on aggregate economic activity. Keeping aggregate employment constant, furthermore, low-skill unemployment rises, following an increase in the relative supply of high-skill labour, and relative wages may be insensitive to changes in relative labour supplies. The model may help to explain rising wage inequality in some countries since the early 1970s. See "Wage inequality and overeducation in a model with efficiency wage" by Peter Skott, *Canadian Journal of Economics*, February 2006, Vol. 39, no. 1, pp. 94-123.

### ■ *Directed search on the job and the wage ladder*

This study models a labour market where employed workers search on the job and firms direct workers' search using wage offers and employment probabilities. Applicants observe all offers and face a trade-off between wage and employment probability. Wage dispersion is found among workers, even though all workers and jobs are homogeneous. Equilibrium wages form a ladder, as workers optimally choose to climb the ladder one rung at a time. This is because low-wage applicants are relatively more sensitive to employment probability than to wage and thus forgo the opportunity to apply for a high wage, with a lower chance of success. See "Directed search on the job and the wage ladder" by Alain Delacroix and Shouyong Shi, *International Economic Review*, May 2006, Vol. 47, no. 2, pp. 651-699.

### ■ *Equilibrium search unemployment with explicit spatial frictions*

Assuming that job search efficiency decreases with distance to jobs, workers' location in a city depends on spatial elements such as commuting costs and land prices and on labour elements such as wages and the matching technology. In the absence of moving costs, the study finds a unique equilibrium in which employed and unemployed workers are perfectly segregated but move at each employment transition. The study investigates the interactions between the land and the labour market equilibrium and shows under which



condition they are interdependent. See "Equilibrium search unemployment with explicit spatial frictions" by Etienne Wasmer and Yves Zenou, *Labour Economics*, April 2006, Vol. 13, no. 2, pp. 143-165.

■ ***Impact of the oil price on expectations and wages***

Global inflation prospects have seen a trend of improvement in recent months, as the recent rise in oil prices has thus far had less effect on wage growth than predicted. The impact of oil prices on inflation

depends crucially on the behaviour of expectations, on wage bargaining practices and on the targeting regime of the monetary authorities. The wage decline due to rising oil prices is most pronounced in Germany but is also evident in France, Great Britain, Canada and Japan. See "The world economy: Impact of the oil price on expectations and wages," *National Institute Economic Review*, January 2006, no. 195, pp. 9-15.

# Varia

*In this issue: Updates on work absences and retirement*

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*Major wage settlements*  
Workplace Information Directorate  
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*Labour income*  
Anna MacDonald  
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*Survey of Labour and Income Dynamics*  
*Survey of Financial Security*  
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(613) 951-7355 or 1 888 297-7355

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### Pension surveys

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Michel Palardy  
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*Quarterly Survey of Trusteed Pension Funds*  
Gregory Sannes  
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Ernest B. Akyeampong  
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*Adult Education and Training Survey*  
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*National Graduates Survey*  
Client Services  
(613) 951-7608



# Work absences

There are many kinds of absence. Some, such as annual vacations, are generally considered beneficial for both the organization and the employee. Since they are usually scheduled, their effect on the organization can be fairly easily absorbed; the same can be said of statutory holidays. Other absences, such as those caused by illness and family-related demands, are generally unavoidable, as are those due to inclement weather.

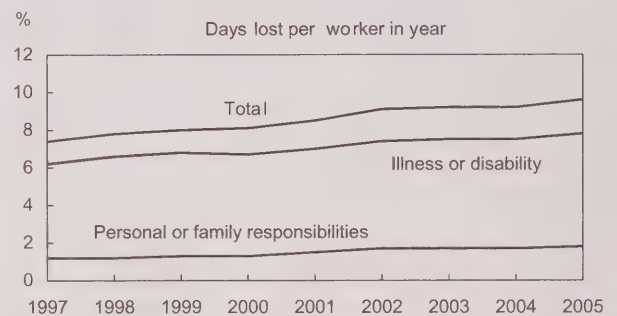
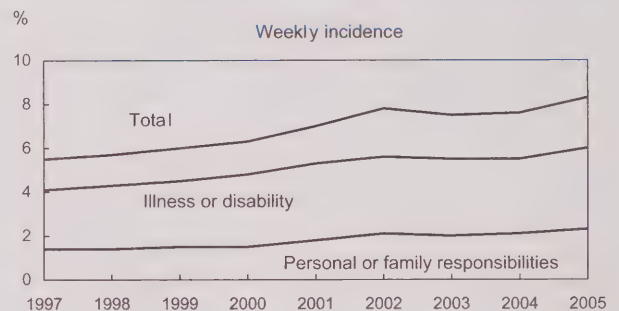
'Absenteeism'—a term used to refer to absences that are avoidable, habitual and unscheduled—is a source of irritation to employers and co-workers. Such absences are disruptive to proper work scheduling and output, and costly to an organization and the economy as a whole.

Although absenteeism is widely acknowledged to be a problem, it is not easy to quantify. The dividing line between avoidable and unavoidable is difficult to draw, and absenteeism generally masquerades as legitimate absence. The Labour Force Survey (LFS) can provide measures of time lost because of 'personal reasons,' that is, illness or disability, and personal or family responsibilities. However, within these categories, it is impossible to determine if an absence is avoidable or unscheduled. LFS data on absences for personal reasons can, however, be analyzed to identify patterns or trends that indicate the effect of absenteeism (see *Data source and definitions*).

## Recent trends—1997 to 2005

Estimates from the Labour Force Survey reveal a steady rising trend in both work absence incidence and time lost for personal reasons (own illness or disability, and other personal and family demands) between 1997 and 2002, a stabilization between 2002 and 2004, and a significant jump in 2005.<sup>1</sup> Several factors accounted for the rising trend: notably, the aging of the workforce; the growing share of women in the workforce, especially mothers with young children; high

Chart: Work absence rates, 1997 to 2005



Source: Labour Force Survey

stress among workers,<sup>2</sup> and the increasing prevalence of generous sick and family-related leave at the workplace (Chart).

In an average week in 1997, excluding women on maternity leave, about 5.5% (484,000) of all full-time employees holding one job were absent from work for all or part of the week for personal reasons. By 2004, the figure had risen to 7.6% (800,000) and to 8.3%

(877,000) in 2005 (Table 1). Total work time missed for these reasons also rose steadily, from 3.0% of the weekly scheduled work time in 1997 to 3.7% in 2004, and 3.9% in 2005. Extrapolated over the full year, work time lost for personal reasons increased from the equivalent of 7.4 days per worker in 1997 to 9.2 days in 2004, and 9.6 days in 2005.

### Variations in absence rates in 2005

Absence for personal reasons differs among various worker groups. Several factors are responsible; among the principal ones are working conditions (for example, the physical environment, degree of job stress, employer-employee relations, collective agreement provisions, work schedules); adequacy and affordability of community facilities such as child-care centres and public transportation; family circumstances, especially the presence of preschool children and other dependent family members; and physical health of the worker, a factor closely related to age. Measuring the effects of these and other contributing factors is not easy since many are not captured by the LFS. However, some insight is gained by examining personal absences in 2005 by selected demographic characteristics, occupation and industry, and other attributes such as union and job status.

### Demographic differences

In 2005, excluding women on maternity leave, an estimated 8.3% (877,000) of full-time employees missed some work each week for personal reasons: 6.0% for own illness or disability, and 2.3% for personal or family responsibilities (Table 2). As a result, full-time employees lost about 3.9% of their work time each week.

On average, each full-time employee lost 9.6 days over the year for personal reasons (about 7.8 for own illness or disability, and 1.8 for personal or family demands). In total, full-time employees missed an estimated 102 million workdays for personal reasons in 2005.

On average, men working full time lost fewer days (8.6 or 6.9 for illness or disability plus 1.7 for personal or family demands) than women full-time employees (11.2 or 9.1 plus 2.0).

The presence of preschool-aged children exerts a strong influence on work absences for personal or family responsibilities. For example, in 2005, full-time

employees in families with at least one preschool-aged child lost on average 4.5 days, compared with only 1.4 days lost by workers in families with no preschool-aged children.

The growing prevalence of family-leave entitlements in the workplace, the extension of Employment Insurance parental benefits,<sup>3</sup> and the greater involvement of fathers in child care appear to have eliminated the difference between the sexes in respect to work absences for personal or family responsibilities. In 1997, women with preschool-aged children and working full time lost 4.1 days for such reasons, compared with 1.8 days for men in similar circumstances. By 2005, the gap had narrowed considerably (5.1 days for women versus 4.1 for men).

Workdays missed because of illness or disability tended to rise with age, from an average of 5.0 days for youth (15 to 19) to 10.8 for full-time employees aged 55 to 64.

### Industry and sector

Work absence rates differ by sector (public or private) and industry, with almost all of the difference emanating from illness and disability absences (Table 3). Contributing factors include the nature and demands of the job, the male/female composition of the workforce, and the union density—the last being a strong determinant of the presence or lack of paid sick/family leave entitlements.

Full-time employees in the public sector (more likely unionized or female) lost more work time in 2005 for personal reasons (about 12.5 days on average) than their private-sector counterparts (8.9 days).

At the major (2-digit) industry level, the most workdays missed were by employees in health care and social assistance (14.2 days), transportation and warehousing (12.2), and public administration (12.2).

The lowest averages were recorded by full-time workers in professional, scientific and technical services (5.3 days), other services (6.8), and the primary industries (7.6).

### Occupation

Contributing factors by occupational absence rates are similar to those for industry (Table 4). Again, as by major industry, differences arise mainly from time lost due to illness or disability.



The most days lost in 2005 were recorded for full-time employees in health occupations (15.0), and occupations unique to production (11.8).

Workers in managerial jobs (6.1), and natural and applied sciences (7.2) recorded the fewest days lost.

### Union coverage, job status, workplace size and job tenure

Full-time workers who belonged to unions or were covered by collective agreements missed 67% more workdays on average in 2005 for personal reasons than their non-unionized counterparts (13.2 versus 7.9) (Table 5).

Workers who considered their jobs to be permanent (and hence more likely to be unionized) lost more workdays (9.9) than those who said their jobs were not permanent (7.4).

Days lost tended to rise with workplace size, increasing from a low of 8.1 in workplaces with fewer than 20 employees (firms more likely to have low union rates) to over 10.0 in workplaces with 100 employees or more (firms likely to have high union rates).

Days lost tended to rise with job tenure, with almost all the differences arising from illness and disability. They rose from an average of 7.1 days among persons with tenure of up to one year to 11.4 days among those with tenure over 14 years (the latter group likely being older).

### Province and CMA

Work absence levels differed by geographic area (Table 6), with most of the variation again arising from illness or disability.

Full-time employees in Quebec (11.2) and Saskatchewan (11.1 days) lost the most work time in 2005. Those in Prince Edward Island, Alberta and Ontario lost the least (8.6 days each).

Among the census metropolitan areas, workers in Halifax, Saguenay, Sherbrooke and Victoria lost the most workdays (an average of over 11.0 days per full-time worker). Those in Toronto and Kitchener-Waterloo lost the least time (an average of less than 8.0 days per full-time worker).

## Perspectives

### ■ Notes

1 1997 marks the introduction of the revised Labour Force Survey questionnaire.

2 For more information on this subject, see Margot Shields, "Stress, health and the benefit of social support," *Health Reports* (Statistics Canada, Catalogue 82-003-XIE) 15, no. 1, January 2004.

Also see Cara Williams, "Sources of workplace stress," *Perspectives on Labour and Income* (Statistics Canada, Catalogue 75-001-XIE) 4, no. 6, June 2003 online edition.

3 In December 2000, changes in Employment Insurance regulations extended the duration of parental leave benefits from 10 to 35 weeks. The 35 weeks can be taken by one (qualifying) parent, or they can be split between both (qualifying) parents.

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Table 1 Absence rates for full-time paid workers by sex, 1997 to 2005, excluding maternity leave

	Incidence <sup>1</sup>			Inactivity <sup>2</sup>			Days lost per worker in year <sup>3</sup>		
	Total	Own illness or disability	Personal or family responsibilities	Total	Own illness or disability	Personal or family responsibilities	Total	Own illness or disability	Personal or family responsibilities
	%			%			days		
Both sexes									
1997	5.5	4.1	1.4	3.0	2.5	0.5	7.4	6.2	1.2
1998	5.7	4.3	1.4	3.1	2.6	0.5	7.8	6.6	1.2
1999	6.0	4.5	1.5	3.2	2.7	0.5	8.1	6.8	1.3
2000	6.3	4.8	1.5	3.2	2.7	0.5	8.0	6.7	1.3
2001	7.0	5.3	1.8	3.4	2.8	0.6	8.5	7.0	1.5
2002	7.8	5.6	2.1	3.6	3.0	0.7	9.1	7.4	1.7
2003	7.5	5.5	2.0	3.7	3.0	0.7	9.2	7.5	1.7
2004	7.6	5.5	2.1	3.7	3.0	0.7	9.2	7.5	1.7
2005	8.3	6.0	2.3	3.9	3.1	0.7	9.6	7.8	1.8
Men									
1997	4.6	3.4	1.2	2.5	2.1	0.4	6.3	5.3	0.9
1998	4.9	3.7	1.2	2.7	2.3	0.4	6.9	5.8	1.0
1999	5.2	3.9	1.3	2.8	2.4	0.4	7.0	5.9	1.1
2000	5.5	4.1	1.4	2.8	2.4	0.4	7.0	5.9	1.1
2001	6.1	4.6	1.6	3.1	2.5	0.5	7.6	6.3	1.3
2002	6.7	4.8	1.9	3.2	2.6	0.6	8.0	6.5	1.6
2003	6.5	4.7	1.8	3.3	2.6	0.6	8.2	6.6	1.5
2004	6.6	4.6	2.0	3.2	2.6	0.7	8.0	6.4	1.6
2005	7.2	5.2	2.1	3.4	2.7	0.7	8.6	6.9	1.7
Women									
1997	6.7	5.1	1.7	3.6	3.0	0.6	9.1	7.6	1.5
1998	6.7	5.1	1.6	3.7	3.1	0.6	9.2	7.8	1.5
1999	7.1	5.4	1.8	3.8	3.2	0.6	9.6	8.0	1.6
2000	7.5	5.7	1.8	3.8	3.2	0.6	9.4	7.9	1.5
2001	8.2	6.2	2.0	3.9	3.2	0.7	9.8	8.0	1.8
2002	9.2	6.7	2.4	4.3	3.5	0.8	10.7	8.7	1.9
2003	8.9	6.6	2.3	4.3	3.5	0.8	10.7	8.8	1.9
2004	8.9	6.6	2.3	4.3	3.6	0.7	10.8	9.0	1.9
2005	9.6	7.0	2.6	4.5	3.7	0.8	11.2	9.1	2.0

1 Absent workers divided by total.

2 Hours absent divided by hours usually worked.

3 Inactivity rate multiplied by working days in year (250).

Source: Labour Force Survey



**Table 2 Absence rates for full-time paid workers by sex, age, education and presence of children, 2005, excluding maternity leave**

	Incidence <sup>1</sup>			Inactivity <sup>2</sup>			Days lost per worker in year <sup>3</sup>		
	Total	Own illness or disability	Personal or family responsibilities	Total	Own illness or disability	Personal or family responsibilities	Total	Own illness or disability	Personal or family responsibilities
Age	%			%			days		
<b>Both sexes</b>	<b>8.3</b>	<b>6.0</b>	<b>2.3</b>	<b>3.9</b>	<b>3.1</b>	<b>0.7</b>	<b>9.6</b>	<b>7.8</b>	<b>1.8</b>
15 to 19	7.0	5.3	1.7	2.6	2.0	0.6	6.4	5.0	1.4
20 to 24	7.3	5.4	1.9	2.8	2.3	0.6	7.1	5.7	1.4
25 to 34	8.8	6.1	2.7	3.6	2.7	0.9	9.1	6.8	2.3
35 to 44	8.5	6.0	2.6	3.9	3.1	0.8	9.8	7.8	2.0
45 to 54	7.9	5.9	2.0	4.0	3.4	0.6	10.0	8.5	1.6
55 to 64	8.5	6.6	1.9	5.0	4.3	0.6	12.4	10.8	1.6
65 and over	6.5	4.3	2.2	3.5	2.9	0.7	8.8	7.2	1.7
<b>Men</b>	<b>7.2</b>	<b>5.2</b>	<b>2.1</b>	<b>3.4</b>	<b>2.7</b>	<b>0.7</b>	<b>8.6</b>	<b>6.9</b>	<b>1.7</b>
15 to 19	6.3	4.7	1.6	2.5	1.9	0.5	6.1	4.8	1.4
20 to 24	6.9	5.1	1.8	2.7	2.1	0.6	6.7	5.3	1.4
25 to 34	7.4	5.0	2.4	3.1	2.3	0.9	7.9	5.6	2.2
35 to 44	7.3	5.0	2.3	3.4	2.6	0.7	8.4	6.6	1.8
45 to 54	7.0	5.2	1.8	3.6	3.1	0.5	9.0	7.7	1.3
55 to 64	7.6	5.9	1.7	4.6	4.1	0.5	11.4	10.1	1.3
65 and over	6.8	4.4	F	3.9	3.2	F	9.7	8.0	F
<b>Women</b>	<b>9.6</b>	<b>7.0</b>	<b>2.6</b>	<b>4.5</b>	<b>3.7</b>	<b>0.8</b>	<b>11.2</b>	<b>9.1</b>	<b>2.0</b>
15 to 19	8.1	6.2	1.9	2.7	2.2	0.6	6.8	5.4	1.4
20 to 24	7.8	5.9	1.9	3.1	2.5	0.6	7.8	6.3	1.5
25 to 34	10.7	7.5	3.2	4.4	3.4	0.9	10.9	8.6	2.3
35 to 44	10.1	7.1	2.9	4.7	3.8	0.9	11.8	9.5	2.3
45 to 54	9.0	6.8	2.2	4.5	3.8	0.7	11.3	9.5	1.8
55 to 64	9.7	7.6	2.1	5.5	4.8	0.8	13.8	11.9	1.9
65 and over	6.0	F	F	2.8	F	F	7.1	F	F
<b>Educational attainment</b>									
<b>Both sexes</b>	<b>8.3</b>	<b>6.0</b>	<b>2.3</b>	<b>3.9</b>	<b>3.1</b>	<b>0.7</b>	<b>9.6</b>	<b>7.8</b>	<b>1.8</b>
Less than Grade 9	8.1	6.3	1.8	4.6	3.9	0.6	11.4	9.8	1.6
Some secondary	9.0	6.8	2.3	4.8	4.1	0.8	12.1	10.1	2.0
High school graduate	8.0	5.9	2.1	3.8	3.2	0.6	9.5	7.9	1.6
Some postsecondary	8.6	6.2	2.4	3.8	3.0	0.8	9.5	7.6	1.9
Postsecondary certificate or diploma	8.7	6.3	2.4	4.1	3.4	0.7	10.4	8.5	1.9
University degree	7.4	5.0	2.4	3.0	2.2	0.8	7.5	5.5	2.0
<b>Presence of children</b>									
<b>Both sexes</b>	<b>8.3</b>	<b>6.0</b>	<b>2.3</b>	<b>3.9</b>	<b>3.1</b>	<b>0.7</b>	<b>9.6</b>	<b>7.8</b>	<b>1.8</b>
With children	8.7	5.8	2.9	4.0	3.0	1.0	10.0	7.6	2.4
Preschool-aged (under 5 years)	10.1	5.7	4.4	4.4	2.6	1.8	11.0	6.5	4.5
5 to 12 years	8.7	5.9	2.8	3.9	3.1	0.7	9.6	7.8	1.8
13 years and over	7.7	5.8	1.9	3.9	3.3	0.6	9.6	8.1	1.5
Without children	7.9	6.1	1.8	3.8	3.2	0.6	9.4	8.0	1.4

1 Absent workers divided by total.

2 Hours absent divided by hours usually worked.

3 Inactivity rate multiplied by working days in year (250).

Source: Labour Force Survey

**Table 3 Absence rates for full-time paid workers by industry and sector, 2005, excluding maternity leave**

	Incidence <sup>1</sup>			Inactivity <sup>2</sup>			Days lost per worker in year <sup>3</sup>		
	Total	Own illness or disability	Personal or family responsibilities	Total	Own illness or disability	Personal or family responsibilities	Total	Own illness or disability	Personal or family responsibilities
		%			%		days		
<b>All industries</b>	<b>8.3</b>	<b>6.0</b>	<b>2.3</b>	<b>3.9</b>	<b>3.1</b>	<b>0.7</b>	<b>9.6</b>	<b>7.8</b>	<b>1.8</b>
Public employees	10.1	7.7	2.5	5.0	4.1	0.9	12.5	10.2	2.3
Private employees	7.7	5.5	2.2	3.5	2.9	0.7	8.9	7.1	1.7
<b>Goods-producing</b>	<b>7.8</b>	<b>5.5</b>	<b>2.4</b>	<b>3.7</b>	<b>3.0</b>	<b>0.7</b>	<b>9.3</b>	<b>7.5</b>	<b>1.8</b>
Primary	6.0	4.0	2.0	3.0	2.3	0.7	7.6	5.8	1.8
Agriculture	6.6	4.1	2.5	2.5	1.8	0.7	6.3	4.5	1.9
Other	5.7	3.9	1.8	3.2	2.5	0.7	8.1	6.3	1.8
Utilities	7.9	5.8	2.1	3.6	3.0	0.6	9.1	7.5	1.6
Construction	7.2	4.8	2.4	3.3	2.6	0.7	8.3	6.5	1.8
Manufacturing	8.4	5.9	2.5	4.0	3.3	0.7	9.9	8.2	1.8
Durable	9.0	6.2	2.7	4.2	3.4	0.8	10.4	8.5	2.0
Non-durable	7.5	5.4	2.0	3.7	3.1	0.6	9.2	7.7	1.5
<b>Service-producing</b>	<b>8.4</b>	<b>6.2</b>	<b>2.2</b>	<b>3.9</b>	<b>3.2</b>	<b>0.7</b>	<b>9.8</b>	<b>7.9</b>	<b>1.9</b>
Trade	7.3	5.4	1.9	3.3	2.7	0.6	8.2	6.7	1.5
Wholesale	7.5	5.3	2.3	3.2	2.6	0.6	8.1	6.5	1.6
Retail	7.3	5.5	1.8	3.3	2.7	0.6	8.2	6.8	1.4
Transportation and warehousing	8.4	6.2	2.1	4.9	4.1	0.8	12.2	10.2	2.0
Finance, insurance, real estate and leasing	8.2	6.0	2.2	3.6	2.9	0.6	8.9	7.3	1.6
Finance and insurance	8.6	6.4	2.2	3.8	3.2	0.6	9.5	8.0	1.6
Real estate and leasing	6.5	4.4	2.1	2.6	1.9	0.6	6.4	4.9	1.6
Professional, scientific and technical	6.6	4.2	2.4	2.1	1.6	0.6	5.3	3.9	1.4
Business, building and support services	9.9	7.3	2.6	4.4	3.6	0.8	11.0	8.9	2.1
Educational services	8.9	6.4	2.5	3.9	3.0	1.0	9.8	7.4	2.4
Health care and social assistance	10.5	8.3	2.1	5.7	4.9	0.8	14.2	12.2	2.0
Information, culture and recreation	7.6	5.6	2.1	3.4	2.7	0.7	8.5	6.7	1.8
Accommodation and food services	7.0	5.1	1.9	3.6	2.9	0.7	9.1	7.2	1.8
Other services	6.7	4.5	2.2	2.7	2.1	0.6	6.8	5.2	1.6
Public administration	10.5	7.6	2.9	4.9	3.8	1.1	12.2	9.4	2.7
Federal	13.4	9.4	4.0	5.8	4.3	1.5	14.4	10.8	3.6
Provincial	9.5	7.0	2.5	4.3	3.3	1.0	10.7	8.3	2.4
Local, other	7.8	5.8	2.0	4.2	3.5	0.7	10.6	8.7	1.9

1 Absent workers divided by total.

2 Hours absent divided by hours usually worked.

3 Inactivity rate multiplied by working days in year (250).

Source: Labour Force Survey



**Table 4 Absence rates for full-time paid workers by occupation, 2005, excluding maternity leave**

	Incidence <sup>1</sup>			Inactivity <sup>2</sup>			Days lost per worker in year <sup>3</sup>		
	Total	Own illness or disability	Personal or family responsibilities	Total	Own illness or disability	Personal or family responsibilities	Total	Own illness or disability	Personal or family responsibilities
	%			%			days		
<b>All occupations</b>	<b>8.3</b>	<b>6.0</b>	<b>2.3</b>	<b>3.9</b>	<b>3.1</b>	<b>0.7</b>	<b>9.6</b>	<b>7.8</b>	<b>1.8</b>
Management	6.1	3.9	2.2	2.4	1.8	0.6	6.1	4.5	1.6
Business, finance and administrative	9.3	6.7	2.6	3.9	3.1	0.8	9.8	7.8	2.0
Professional	7.7	5.4	2.3	3.0	2.4	0.7	7.6	6.0	1.6
Financial and administrative	8.7	6.0	2.7	3.7	2.8	0.8	9.1	7.1	2.1
Clerical	10.0	7.3	2.7	4.3	3.5	0.8	10.8	8.6	2.1
Natural and applied sciences	7.4	5.0	2.4	2.9	2.2	0.7	7.2	5.4	1.8
Health	10.4	8.5	1.9	6.0	5.2	0.8	15.0	13.1	1.9
Professional	7.6	5.2	2.4	3.1	2.2	0.9	7.8	5.5	2.2
Nursing	9.8	7.9	1.9	5.6	4.8	0.8	13.9	11.9	1.9
Technical	10.6	8.7	1.9	6.5	5.8	0.7	16.2	14.4	1.8
Support staff	12.0	10.2	1.7	7.2	6.5	0.7	18.1	16.3	1.8
Social and public service	8.7	6.1	2.6	3.7	2.8	0.9	9.3	7.0	2.3
Legal, social and religious	8.9	6.3	2.6	3.7	3.0	0.8	9.3	7.4	1.9
Teachers and professors	8.5	6.0	2.5	3.7	2.7	1.0	9.3	6.7	2.6
Secondary and elementary	9.9	7.0	2.9	4.3	3.1	1.2	10.7	7.7	3.0
Other	5.3	3.6	1.7	2.4	1.7	0.7	6.1	4.3	1.8
Culture and recreation	8.2	5.7	2.5	3.2	2.4	0.8	7.9	5.9	2.0
Sales and service	7.7	5.8	1.9	3.9	3.2	0.7	9.7	8.0	1.7
Wholesale	6.2	4.1	2.1	2.5	1.9	0.6	6.1	4.7	1.4
Retail	7.1	5.4	1.7	3.3	2.6	0.7	8.3	6.6	1.7
Food and beverage	6.3	4.7	1.6	3.3	2.7	0.6	8.3	6.8	1.6
Protective services	8.1	6.5	1.6	5.0	4.3	0.7	12.4	10.7	1.7
Childcare and home support	9.5	6.7	2.8	3.9	3.1	0.8	9.7	7.8	1.9
Travel and accommodation	9.1	7.1	2.0	4.9	4.1	0.7	12.2	10.4	1.8
Trades, transport and equipment operators	8.0	5.7	2.2	4.1	3.4	0.7	10.2	8.5	1.8
Contractors and supervisors	6.0	4.2	1.8	2.9	2.4	0.5	7.2	6.0	1.2
Construction trades	8.0	5.4	2.6	3.9	3.1	0.8	9.6	7.7	1.9
Other trades	8.1	5.7	2.4	3.7	3.0	0.7	9.3	7.6	1.7
Transport equipment operators	7.5	5.8	1.7	4.9	4.2	0.7	12.3	10.5	1.8
Helpers and labourers	9.1	6.5	2.6	4.4	3.7	0.7	11.0	9.1	1.8
Occupations unique to primary industry	6.0	4.3	1.7	3.1	2.6	0.6	7.8	6.4	1.4
Occupations unique to production	9.3	6.9	2.4	4.7	4.0	0.7	11.8	10.0	1.9
Machine operators and assemblers	9.1	6.7	2.4	4.6	3.9	0.7	11.6	9.7	1.9
Labourers	10.1	7.8	2.4	5.2	4.5	0.7	13.0	11.2	1.8

1 Absent workers divided by total.

2 Hours absent divided by hours usually worked.

3 Inactivity rate multiplied by working days in year (250).

Source: Labour Force Survey

**Table 5 Absence rates for full-time paid workers by workplace size, job tenure, job status and union coverage, 2005, excluding maternity leave**

	Incidence <sup>1</sup>			Inactivity <sup>2</sup>			Days lost per worker in year <sup>3</sup>		
	Total	Own illness or disability	Personal or family responsibilities	Total	Own illness or disability	Personal or family responsibilities	Total	Own illness or disability	Personal or family responsibilities
	%			%			days		
Workplace size									
Both sexes	8.3	6.0	2.3	3.9	3.1	0.7	9.6	7.8	1.8
Under 20 employees	7.3	5.0	2.3	3.2	2.5	0.7	8.1	6.3	1.8
20 to 99 employees	8.1	5.8	2.3	3.7	3.0	0.7	9.2	7.4	1.8
100 to 500 employees	9.0	6.7	2.3	4.3	3.6	0.7	10.9	9.0	1.9
Over 500 employees	9.6	7.3	2.3	4.8	4.0	0.8	12.0	10.0	2.0
Job tenure									
Both sexes	8.3	6.0	2.3	3.9	3.1	0.7	9.6	7.8	1.8
1 to 12 months	7.3	5.1	2.2	2.8	2.1	0.7	7.1	5.4	1.8
Over 1 to 5 years	8.4	6.0	2.3	3.7	3.0	0.8	9.3	7.4	1.9
Over 5 to 9 years	8.8	6.2	2.5	4.2	3.4	0.8	10.5	8.4	2.1
Over 9 to 14 years	8.4	6.0	2.4	4.0	3.3	0.7	10.1	8.2	1.9
Over 14 years	8.5	6.4	2.1	4.6	3.9	0.7	11.4	9.8	1.6
Job status									
Both sexes	8.3	6.0	2.3	3.9	3.1	0.7	9.6	7.8	1.8
Permanent	8.4	6.1	2.3	4.0	3.2	0.7	9.9	8.0	1.9
Non-permanent	6.9	4.9	2.0	3.0	2.3	0.7	7.4	5.7	1.7
Union coverage									
Both sexes	8.3	6.0	2.3	3.9	3.1	0.7	9.6	7.8	1.8
Union member or covered by collective agreement	10.0	7.7	2.3	5.3	4.4	0.8	13.2	11.1	2.1
Non-unionized	7.4	5.1	2.3	3.2	2.5	0.7	7.9	6.2	1.7

1 Absent workers divided by total.

2 Hours absent divided by hours usually worked.

3 Inactivity rate multiplied by working days in year (250).

Source: Labour Force Survey

**Table 6 Absence rates for full-time paid workers by province, region and census metropolitan area (CMA), 2005, excluding maternity leave**

	Incidence <sup>1</sup>			Inactivity <sup>2</sup>			Days lost per worker in year <sup>3</sup>		
	Total	Own illness or disability	Personal or family responsibilities	Total	Own illness or disability	Personal or family responsibilities	Total	Own illness or disability	Personal or family responsibilities
<b>Province and region</b>		%			%		days		
<b>Both sexes</b>	<b>8.3</b>	<b>6.0</b>	<b>2.3</b>	<b>3.9</b>	<b>3.1</b>	<b>0.7</b>	<b>9.6</b>	<b>7.8</b>	<b>1.8</b>
Atlantic	8.2	6.2	2.1	4.1	3.4	0.7	10.2	8.5	1.7
Newfoundland and Labrador	6.9	5.3	1.6	3.8	3.2	0.6	9.5	8.1	1.4
Prince Edward Island	7.7	5.4	2.3	3.4	2.8	0.7	8.6	6.9	1.6
Nova Scotia	8.8	6.6	2.2	4.3	3.6	0.7	10.8	9.0	1.8
New Brunswick	8.5	6.3	2.2	4.1	3.4	0.7	10.3	8.5	1.8
Quebec	8.7	6.6	2.0	4.5	3.8	0.6	11.2	9.6	1.6
Ontario	8.1	5.7	2.5	3.5	2.7	0.8	8.6	6.7	1.9
Prairies	8.2	5.7	2.5	3.7	2.9	0.8	9.3	7.2	2.1
Manitoba	8.7	6.1	2.6	4.0	3.2	0.8	9.9	7.9	2.0
Saskatchewan	9.6	6.8	2.8	4.4	3.6	0.9	11.1	8.9	2.2
Alberta	7.7	5.3	2.4	3.4	2.6	0.8	8.6	6.5	2.1
British Columbia	7.9	5.9	2.0	4.1	3.4	0.7	10.3	8.5	1.9
<b>CMA</b>									
<b>Both sexes</b>	<b>8.3</b>	<b>6.0</b>	<b>2.3</b>	<b>3.9</b>	<b>3.1</b>	<b>0.7</b>	<b>9.6</b>	<b>7.8</b>	<b>1.8</b>
All CMAs	8.3	6.0	2.3	3.8	3.0	0.7	9.4	7.6	1.8
St. John's	8.3	6.1	2.1	4.3	3.5	0.8	10.8	8.8	2.0
Halifax	9.8	7.5	2.3	4.4	3.7	0.7	11.1	9.3	1.8
Saint John	8.0	6.2	1.8	4.0	3.4	0.6	10.1	8.5	1.6
Saguenay	8.1	6.3	F	4.8	4.1	F	11.9	10.3	F
Québec	8.5	6.2	2.2	4.4	3.5	0.8	10.9	8.8	2.0
Montréal	8.9	6.7	2.1	4.3	3.7	0.6	10.7	9.1	1.6
Trois-Rivières	7.8	6.1	F	3.9	3.4	F	9.9	8.6	F
Sherbrooke	8.7	6.7	F	4.8	4.2	F	11.9	10.4	F
Gatineau	11.2	8.6	2.7	5.2	4.4	0.9	13.0	10.9	2.1
Ottawa	10.3	7.2	3.2	3.9	3.0	0.9	9.9	7.6	2.3
Kingston	9.1	6.4	F	4.3	3.4	F	10.8	8.4	F
Greater Sudbury / Grand Sudbury	8.0	5.4	F	3.8	3.0	F	9.5	7.6	F
Toronto	7.4	5.2	2.2	3.0	2.3	0.7	7.5	5.8	1.7
Hamilton	8.6	6.2	2.3	3.7	3.1	0.6	9.3	7.8	1.6
St. Catharines-Niagara	8.5	6.2	2.4	4.0	3.2	0.8	10.0	8.1	1.9
London	9.0	6.4	2.6	4.0	3.2	0.8	10.1	8.1	2.0
Windsor	9.1	6.1	3.0	4.4	3.3	1.0	10.9	8.3	2.6
Kitchener-Waterloo	7.9	5.5	2.4	3.2	2.5	0.7	7.9	6.3	1.6
Oshawa	8.0	5.8	2.2	3.3	2.8	0.6	8.3	6.9	1.4
Thunder Bay	8.6	5.9	F	4.4	3.5	F	10.9	8.7	F
Winnipeg	8.8	6.3	2.5	3.8	3.0	0.8	9.4	7.5	1.9
Regina	9.4	6.9	2.5	4.4	3.7	0.7	11.0	9.2	1.8
Saskatoon	9.2	6.8	2.3	4.0	3.3	0.7	10.1	8.2	1.8
Calgary	7.7	5.3	2.3	3.5	2.6	0.9	8.7	6.6	2.2
Edmonton	7.7	5.4	2.3	3.4	2.6	0.7	8.4	6.6	1.9
Abbotsford	8.3	6.0	F	4.3	3.2	F	10.8	8.1	F
Vancouver	7.6	5.9	1.7	4.0	3.4	0.6	10.0	8.4	1.6
Victoria	9.6	7.1	2.6	4.7	3.8	0.9	11.7	9.5	2.2
Non-CMAs	8.2	5.9	2.3	4.2	3.4	0.8	10.5	8.6	1.9
Urban centres	8.2	5.8	2.4	3.8	3.0	0.8	9.5	7.6	1.9

<sup>1</sup> Absent workers divided by total.<sup>2</sup> Hours absent divided by hours usually worked.<sup>3</sup> Inactivity rate multiplied by working days in year (250).

Source: Labour Force Survey



## Data source and definitions

The data in this article are annual averages from the **Labour Force Survey** (LFS). They refer to full-time employees holding only one job. Part-time, self-employed and unpaid family workers are excluded because they generally have more opportunity to arrange their work schedules around personal or family responsibilities. Multiple jobholders, too, are excluded because it is not possible using LFS data to allocate time lost, or the reason for it, to specific jobs. Women on maternity leave are also excluded. Some human resource practitioners exclude persons on long-term illness or disability leave (exceeding one year) from their attendance management statistics. Such persons are, however, included in Statistics Canada's work absence estimates if they count themselves as employed (that is, they continue to receive partial or full pay from their employer). In 2005, the number of employed persons on such long-term illness or disability leave averaged only 22,000 in a typical week. Their exclusion would have reduced the weekly work absence incidence for illness or disability from 6.0% to 5.8%, the inactivity rate from 3.1% to 2.9%, and days lost per worker that year from 7.8 to 7.3.

**Personal reasons for absence** are split into two categories: 'own illness or disability' and 'personal or family responsibilities' (caring for own children, caring for elder relative, and other personal or family responsibilities). Absences for these two reasons represented about 30% of all time lost by full-time paid workers each week in 2005. Vacations, which accounted for about 40% of total time away from work, are not counted in this study, nor are statutory holidays, which represented 12%. Maternity leave represented 11% and other reasons, 7%.

The **incidence of absence** is the percentage of full-time paid workers reporting some absence in the reference week. In calculating incidence, the length of work absence—whether an hour, a day, or a full week—is irrelevant.

The **inactivity rate** shows hours lost as a proportion of the usual weekly hours of full-time paid workers. It takes into account both the incidence and length of absence in the reference week.

**Days lost per worker** are calculated by multiplying the inactivity rate by the estimated number of working days in the year (250).

### Reasons for work absences in the LFS

The LFS sets out the following reasons for being away from work:

- own illness or disability
- caring for own children
- caring for elder relative (60 years or older)
- maternity leave (women only)
- other personal or family responsibilities
- vacation
- labour dispute (strike or lockout)
- temporary layoff due to business conditions
- holiday (legal or religious)
- weather
- job started or ended during week
- working short time (because of material shortages, plant maintenance or repair, for instance)
- other

As normally published, personal or family responsibilities consist of caring for own children, caring for elder relative, and other personal or family responsibilities.

# Retirement

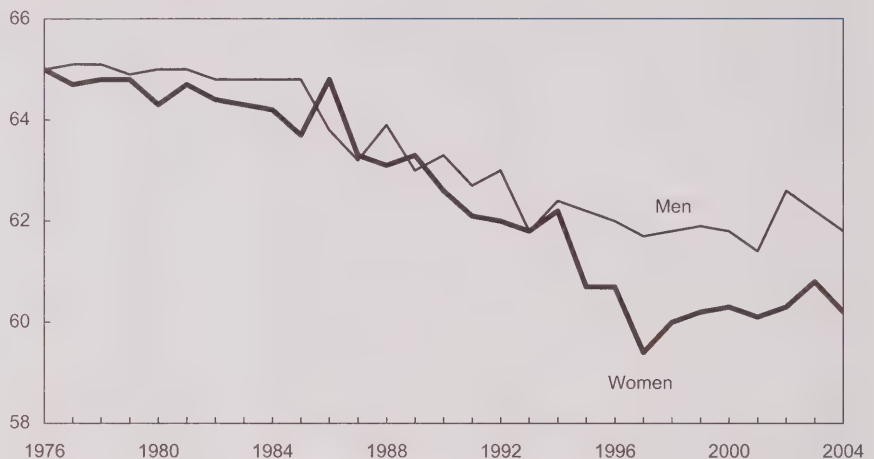
Over the past three decades, the age of retirement has changed dramatically. The median age was close to 65 in the late 1970s and early 1980s, but since the mid-1980s, it has declined considerably.

Between 1986 and 1993, the decline was more or less steady. The sharp drop between 1986 and 1987 is likely explained by the lowering in 1987 of the minimum age at which one could draw benefits from the Canada Pension Plan: from 65 to 60. In 1988, the age increased, probably because most people wishing to take advantage of this early retirement option had done so the previous year. After 1988, however, the downward trend resumed, stabilizing somewhat after 1997.

The retirement age fluctuations in the 1990s may reflect government cutbacks and corporate downsizing. The popularity of early retirement incentives as a tool for workforce adjustment may also have had an impact.

## The age of retirement has been stable in recent years.

Median age of retirement



Source: Labour Force Survey

Over most of the past three decades, women retired slightly earlier than men, with the two sexes following a similar trend. There were exceptions, however. In 1986, for example, women retired

later than men. After some fluctuation following 1999, the median retirement age returned to its 2000 levels in 2004 for both men and women, stabilizing at 60.8 overall.

### Distribution of ages at retirement

	1995 to 1999		2000 to 2004	
	'000	%	'000	%
<b>Total</b>	<b>667</b>	<b>100</b>	<b>734</b>	<b>100</b>
50 to 54	103	15	90	12
55 to 59	177	26	219	30
60 to 64	213	32	227	31
65 to 69	128	19	142	19
70 and over	45	7	56	8

Source: Labour Force Survey

The statistics presented here are for people who retired between 1995 and 1999 or between 2000 and 2004. During the first period, the most popular age for retirement was 60 to 64 (one-third of retirees, or 32%). During the second period, this age group was joined in popularity by those 55 to 59, who now represented 30% of retirees compared with 26% five years earlier. These percentages illustrate a steady upward trend in retirement at age 55 to 59.

At the same time, the percentage retiring between 50 to 54 decreased from 15% to 12%, while figures for the two oldest groups (65 to 69, 70 and older) remained virtually unchanged.

### Measuring retirement

The Labour Force Survey (LFS) was designed to measure labour force activity at a certain point in time: one reference week each month. To provide a meaningful series on retirement, each survey month is scanned and everyone who claims to have retired in the past year is recorded. The month of retirement is taken to be the same as the month last worked. A list of retirees is then organized according to the *month in which they retired*, rather than the month of the survey. Special adjustments to the sampling weights produce an unbiased estimate of retirees.

Since very few people under 50 report retirement as a reason for leaving their job, only those who retired at 50 or over are included here.

For all retired people (except a few 'permanently unable to work'), information is gathered on the last job—specifically, industry, occupation, length of tenure, and employment class (employee or self-employed).

The data refer to the last job, but some people's last job may not be indicative of their careers. These people may have switched jobs shortly before retirement. For this reason, those with brief job tenures are best considered a residual group—that is, representing people with a wide but unknown mix of work histories.

Respondents remain in the LFS sample for six consecutive months. For this study, however, only the response in the first month is used. This self-perceived retirement status is not updated thereafter, even though the respondent's situation may have changed after the first interview.

The majority of people over 50 who left the workforce gave reasons other than retirement for leaving the last job. The two most common ones were 'laid off' and 'sickness or disability'. A high percentage of this group re-entered the labour force within five months of the initial LFS interview. Many more likely found jobs later.



Many factors influence the timing of retirement. Among the most important are the type of last job and length of tenure.<sup>1</sup>

People employed in the public sector (which includes education, health and social services, and government), already the youngest to retire from 1995 to 1999, saw a slight increase in retirement age between 2000 and 2004, from 58.0 to 58.6. Employees in the private sector retired an average four years later than public sector workers during the first period (62.2 versus 58.0), the gap decreasing to about three years during the second period (61.8 versus 58.6).

The self-employed, whose median age of retirement remained close to 65 during both periods, retired later than employees. Industry accounts for much of the age difference between employees and the self-employed (see *Retirement patterns by industry*).

The length of time one has worked in a job prior to retirement seems to have a strong correlation with retirement age. Employers who offer longer tenure, such as government and some large companies, also generally offer good pension plans. This combination allows many employees to build up large entitlements. As might be expected, early retirement is more prevalent in such workplaces. Employer pensions have also been linked with higher retirement incomes (Gower 1995).

Between 2000 and 2004, workers with job tenure of 20 years or more retired three years earlier than those with less than 20 years (59.9 versus 62.9). Among the self-employed, however, the opposite was true. On average, those who had worked 20 years or more retired 3.1 years later than those who had worked less than 20 years (67.3 versus 64.2). This, combined with the rate of increase in their median retirement age, suggests that self-employed workers reach the decision to retire in a very different manner.

### Median age at retirement, and length and sector of employment

Job tenure	Sector	1995 to 1999		2000 to 2004	
		'000	Median age	'000	Median age
Overall	All retirees (aged 50+) <sup>1</sup>	667	61.0	734	61.1
	Public employees	243	58.0	247	58.6
	Private employees	314	62.2	353	61.8
	Self-employed	106	64.9	129	65.1
Less than 20 years	All retirees (aged 50+) <sup>1</sup>	267	62.8	335	62.9
	Public employees	66	60.7	76	60.4
	Private employees	149	63.6	189	63.6
	Self-employed	51	63.7	70	64.2
20 years or more	All retirees (aged 50+) <sup>1</sup>	398	60.1	396	59.9
	Public employees	177	57.0	172	57.4
	Private employees	164	61.1	164	60.4
	Self-employed	55	66.0	59	67.3

<sup>1</sup> Because unpaid family workers are not accounted for in the sub-categories but are included in the totals, numbers do not add to totals.

Note: Job tenure and sector refer to last job prior to retirement.

Source: Labour Force Survey

### Distribution of retirees by month of departure, 2000 to 2004

	Both sexes		Men		Women	
	%	Median age	%	Median age	%	Median age
<b>All months</b>	<b>100.0</b>	<b>61.1</b>	<b>100.0</b>	<b>61.9</b>	<b>100.0</b>	<b>60.3</b>
January	8.2	60.8	7.8	61.6	8.7	60.3
February	4.7	61.3	5.0	60.6	4.5	62.0
March	6.7	60.3	6.6	61.4	6.9	59.6
April	6.5	61.2	6.5	61.4	6.4	60.4
May	8.0	60.8	8.5	60.9	7.3	60.6
June	17.0	59.6	15.2	60.2	19.3	58.8
July	7.4	61.0	7.4	62.4	7.4	60.0
August	7.1	62.3	7.7	63.3	6.3	60.3
September	8.1	62.6	8.8	63.7	7.2	60.3
October	7.4	63.0	8.0	63.3	6.6	61.4
November	6.4	62.4	6.8	62.6	5.9	62.1
December	12.6	61.3	11.9	62.8	13.7	60.8

Source: Labour Force Survey

Between 2000 and 2004, below average retirement ages were recorded in utilities; transportation and warehousing; finance, insurance, real estate and leasing; educational services; health care and social assistance; information, culture and recreation; and public administration.

The greatest decline was found in 'other' primary industries (forestry, fishing, hunting, mining, and oil and gas extraction), where the retirement age dropped from 62.6 to 60.3. Notable declines also occurred in industries with higher than average retirement ages, such as accommodation and food industries (-1.8 years) and professional, scientific and technical industries (-1.4 years). In contrast, the trend seems to have been stable in industries with early retirement ages.

### Median age at retirement by industry, and change over time

	1995 to 1999	2000 to 2004	Change
	Median age	Median age	Years
<b>Industry<sup>1</sup></b>	<b>61.0</b>	<b>61.1</b>	<b>0.1</b>
<b>Goods-producing</b>	<b>63.0</b>	<b>62.2</b>	<b>-0.8</b>
Primary	65.4	64.6	-0.8
Agriculture	67.2	67.3	0.1
Other	62.6	60.3	-2.3
Utilities	55.9	57.0	1.1
Construction	63.7	64.3	0.6
Manufacturing	62.0	61.2	-0.8
<b>Service-producing</b>	<b>60.3</b>	<b>60.6</b>	<b>0.3</b>
Trade	63.1	63.2	0.1
Transportation and warehousing	60.9	60.8	-0.1
Finance, insurance, real estate and leasing	60.4	60.8	0.4
Professional, scientific and technical	65.0	63.6	-1.4
Business, building and other support	64.6	65.0	0.4
Educational services	57.4	58.2	0.8
Health care and social assistance	60.2	60.3	0.1
Information, culture and recreation	60.0	59.6	-0.4
Accommodation and food services	64.6	62.8	-1.8
Other services	63.6	65.0	1.4
Public administration	58.3	58.4	0.1

1 According to last job prior to retirement.  
Source: Labour Force Survey

Not surprisingly, people favoured some months over others to retire. Two months stand out: June and December, with the former more popular. People who retired in June tended to be younger on average. Little has changed over the last three decades. The patterns for men and women are similar, although women were more likely to retire in June. This may relate to the number of women retiring from teaching.

**Median age at retirement by sex and education, 2000 to 2004**

	Both sexes		Men		Women	
	'000	Median age	'000	Median age	'000	Median age
<b>Education</b>	<b>734</b>	<b>61.1</b>	<b>420</b>	<b>61.9</b>	<b>314</b>	<b>60.3</b>
0-8 years	90	64.8	60	64.9	30	64.6
Some secondary	100	63.0	61	63.6	39	62.7
High school graduate	135	60.3	67	60.8	68	59.6
Postsecondary	251	60.6	144	61.3	108	60.3
University degree	157	59.4	88	59.8	69	58.3

Source: Labour Force Survey

Men tended to retire slightly later than women (aged 61.9 versus 60.3). This difference held for people in most education groups except those with eight years of schooling or less.

Changes in the LFS prevent a comparison of education groups over time but, as was the case in the 1990s, differences between education groups in the early 2000s were much greater than differences between men and women. For example, people with a postsecondary certificate or diploma, or a university degree retired more than four years earlier than those with eight years of schooling or less.

Four major occupations showed notable changes in their retirement age trend. Management as well as social science, education, government service and religion—two occupations with below average retirement ages between 1995 and 1999—showed increases of 1.3 and 1.0 years respectively. On the other hand, primary occupations as well as trades, transport and equipment operators—two occupations with higher than average retirement ages—showed declines of 1.0 and 0.9 years respectively.

In both periods, public sector occupations had the lowest retirement age.

Primary occupations still had the highest age of retirement in both periods, despite a decline of one year.

**Median age at retirement by occupation, and change over time**

	1995 to 1999	2000 to 2004	Change
	Median age		Years
<b>All occupations<sup>1</sup></b>	<b>61.0</b>	<b>61.1</b>	<b>0.1</b>
Management	59.9	61.2	1.3
Business, finance and administrative	60.3	60.4	0.1
Natural and applied sciences	60.2	60.6	0.4
Health	60.3	60.1	-0.2
Social science, education, government service and religion	57.3	58.3	1.0
Art, culture, recreation and sport	62.0	62.3	0.3
Sales and service	62.2	62.3	0.1
Trades, transport and equipment operators	62.8	61.9	-0.9
Occupations unique to primary industry	66.4	65.4	-1.0
Occupations unique to processing, manufacturing and utilities	61.7	61.6	-0.1

<sup>1</sup> According to last job prior to retirement.

Source: Labour Force Survey



Between 1995 and 1999, the gap between the highest median retirement age (64.7 in Saskatchewan) and the lowest (58.6 in Newfoundland and Labrador) was 6.1 years. In the 2000 to 2004 period, the gap narrowed to 5.0 years (64.6 in Saskatchewan and 59.6 in Newfoundland and Labrador).

The overall age of retirement remained virtually stable, increases in some provinces being offset by declines in others. These declines varied between 0.1 year in Saskatchewan and 0.9 in Prince Edward Island and New Brunswick. Only Newfoundland and Labrador saw a notable increase in retirement age (one full year).

Different factors influenced provincial findings. For example, in Saskatchewan, the agricultural milieu may help to explain the high and relatively stable retirement age. Further east, Quebec's lowering of the minimum age of entitlement for the Quebec Pension Plan from 65

### Median age at retirement by province

	1995 to 1999		2000 to 2004		Change
	'000	Median age	'000	Median age	Years
<b>Canada</b>	<b>667</b>	<b>61.0</b>	<b>734</b>	<b>61.1</b>	<b>0.1</b>
Saskatchewan	23	64.7	25	64.6	-0.1
Alberta	55	63.6	55	63.7	0.1
British Columbia	86	62.3	99	61.8	-0.5
Prince Edward Island	3	62.3	3	61.4	-0.9
Ontario	255	61.6	292	61.4	-0.2
Manitoba	26	61.3	28	61.3	0.0
Nova Scotia	18	60.3	21	61.1	0.8
Quebec	174	59.6	182	59.9	0.3
New Brunswick	16	60.6	19	59.7	-0.9
Newfoundland and Labrador	10	58.6	10	59.6	1.0

Source: Labour Force Survey

to 60 in 1984—three years before a similar move by the Canada Pension Plan—may have contributed to the stable trend to younger retirement in the province (59.9 in 2000 to 2004). For Newfoundland and Labrador, an unusually good economic performance spurred by a booming energy sector may have led to a higher demand for labour and thus an increase in retirement age.

### Perspectives

#### Note

1 The data relate to the retiree's last job. At least some of those with less than 20 years tenure may have held a long-term job sometime earlier. If those jobs could also be measured, differences in retirement age between people with short and long tenure would probably increase.

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Gower, D. "Men retiring early: How are they doing?" *Perspectives on Labour and Income* (Statistics Canada, Catalogue no. 75-001-XPE) 7, no. 4 (Winter 1995): 30-34.

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Retirement patterns by industry<sup>1</sup>

	1995 to 1999		2000 to 2004	
	'000	Median age	'000	Median age
<b>All workers (aged 50+)</b>	<b>667</b>	<b>61.0</b>	<b>734</b>	<b>61.1</b>
<b>Goods-producing</b>	<b>179</b>	<b>63.0</b>	<b>196</b>	<b>62.2</b>
Primary	37	65.4	36	64.6
Agriculture	24	67.2	22	67.3
Other	13	62.6	15	60.3
Utilities	11	55.9	10	57.0
Construction	34	63.7	42	64.3
Manufacturing	96	62.0	107	61.2
<b>Service-producing</b>	<b>487</b>	<b>60.3</b>	<b>535</b>	<b>60.6</b>
Trade	65	63.1	80	63.2
Transportation and warehousing	40	60.9	44	60.8
Finance, insurance, real estate and leasing	36	60.4	39	60.8
Professional, scientific and technical	22	65.0	31	63.6
Business, building and other support	16	64.6	19	65.0
Educational services	102	57.4	108	58.2
Health care and social assistance	75	60.2	84	60.3
Information, culture and recreation	22	60.0	21	59.6
Accommodation and food	15	64.6	19	62.8
Other services	25	63.6	28	65.0
Public administration	68	58.3	61	58.4
<b>Employees (aged 50+)</b>	<b>557</b>	<b>60.3</b>	<b>600</b>	<b>60.3</b>
<b>Goods-producing</b>	<b>135</b>	<b>61.8</b>	<b>158</b>	<b>61.3</b>
Primary	12	62.3	19	60.9
Agriculture	3	65.3	6	64.4
Other	10	61.7	13	59.8
Utilities	11	55.9	10	57.0
Construction	21	63.2	26	63.9
Manufacturing	91	61.9	103	61.2
<b>Service-producing</b>	<b>422</b>	<b>60.1</b>	<b>442</b>	<b>60.0</b>
Trade	49	63.0	63	62.3
Transportation and warehousing	36	60.8	37	60.1
Finance, insurance, real estate and leasing	30	60.0	31	59.8
Professional, scientific and technical	11	64.1	11	62.2
Business, building and other support	10	64.7	11	64.8
Educational services	100	57.3	103	57.7
Health care and social assistance	68	60.0	78	60.2
Information, culture and recreation	21	59.6	18	58.0
Accommodation and food	12	64.6	12	62.1
Other services	16	62.6	18	64.9
Public administration	68	58.3	61	58.4
<b>Self-employed (aged 50+)</b>	<b>106</b>	<b>64.9</b>	<b>129</b>	<b>65.1</b>
<b>Goods-producing</b>	<b>42</b>	<b>65.0</b>	<b>37</b>	<b>65.9</b>
Primary	24	67.3	17	69.9
Agriculture	20	68.2	15	70.0
Other	4	64.9	2	67.8
Construction	13	64.2	16	65.2
Manufacturing	5	64.7	4	62.2
<b>Service-producing</b>	<b>65</b>	<b>64.7</b>	<b>92</b>	<b>65.0</b>
Trade	16	63.6	17	64.9
Transportation and warehousing	4	64.9	6	65.1
Finance, insurance, real estate and leasing	6	63.7	8	63.7
Professional, scientific and technical	11	66.1	20	64.6
Business, building and other support	6	63.6	8	65.3
Educational services	3	62.0	6	63.2
Health care and social assistance	7	65.3	6	68.9
Information, culture and recreation	0	0.0	3	64.3
Accommodation and food	3	64.9	7	65.7
Other services	8	64.6	11	65.1

<sup>1</sup> Excludes some groups with too small a sample to provide a reliable estimate, so the groups will not add to total. Likewise, industries in the self-employed category exclude unpaid family workers.

Note: These categories describe the last job held prior to retirement. They may or may not reflect a person's lifetime work history.

Source: Labour Force Survey

# In the works

*Some of the topics in upcoming issues*

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## ■ Tapping the Aboriginal workforce

In the face of a shortage of skilled workers, businesses will be looking for every opportunity to fill the labour gap. The Aboriginal population, which is growing faster than other segments of society, may provide a growing share of these workers.

## ■ Training through the ages

With population aging and the corresponding exit from the labour market by the baby-boom generation, concerns are growing about a shrinking labour force. Training may assist older workers to remain in the labour market longer, potentially easing the labour market and financial effects.

## ■ Measuring shelter affordability

Renters are more likely than homeowners to experience housing affordability problems, often because of age and sources of income.

## ■ Paid and unpaid work

Over the past 20 years, men and women have been converging when it comes to their involvement in both paid and unpaid work.

## ■ GST credit

A look at the goods and services tax (GST) in relation to total consumption taxes and as a source of federal government revenue. Persons aged 16 and over and families who received a GST credit in 2003 are profiled.

## ■ Employment and eldercare: balancing the hours

Many who provide informal care to seniors are also active in the labour market, leading to concerns about how they are coping with the work-life balance.

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# PERSPECTIVES

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**AUTUMN 2006**

Vol. 18, No. 3

■ CONVERGING  
GENDER ROLES

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■ EDUCATION AND  
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■ IS THE WORKPLACE  
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## ■ Articles

## 7 Converging gender roles

*Katherine Marshall*

The division of labour between men and women continues to evolve. Today's couples have a much more equal partnership in sharing financial, child care and household responsibilities. This has been brought about in large part by the expanding economic role of women, which has helped erode the idea that men should be primarily responsible for paid work while women look after unpaid household and family duties.

## 20 Wives as primary breadwinners

*Deborah Sussman and Stephanie Bonnell*

Over the last four decades, the dramatic increase in dual-earner couples has also engendered an increase in wives as primary breadwinners. These women tend to be older and more educated than women who are secondary earners, and they are more frequently found in managerial and professional occupations. The article examines the earnings and characteristics of primary- and secondary-earner spouses.

## 28 Education and earnings

*Lucy Chung*

Between 1980 and 2000, and particularly the latter half of the 1990s, the earnings gap widened between young workers who were less-educated and those who were well-educated. Some research attributes the gap to technological change, which requires a workforce that is more skilled and better educated. The subsequent demand resulted in higher wages for such workers and hence increased returns to education. However, the past five years have seen strong job growth in industries that employ many young people with less education. How has the earnings gap been affected?



# PERSPECTIVES

ON LABOUR AND INCOME

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## 36 Is the workplace becoming safer?

*F. Curtis Breslin, Peter Smith, Mieke Koeboorn and Hyunmi Lee*

As in Europe and other parts of North America, compensation claims for lost workdays in Canada have generally declined. Although this event is encouraging, the rate of decrease may not be uniform for all age groups, industries or regions. Workplace injuries among young workers aged 15 to 24 are of particular interest in this look at injury claim rates in Ontario and British Columbia.

## 42 The GST credit

*Raj K. Chawla*

The GST (goods and services tax) provided \$30.6 billion to the federal government in 2002/2003. Of this, \$2.9 billion was paid back as a credit to taxfilers aged 16 and older based on their income. How many individuals received the GST credit, and who are they? Does this credit help to redistribute income?

## 51 Increased work stoppages

*Ernest B. Akyeampong*

Improvements during the 1980s and 1990s in Canada's strike and lockout statistics appear to have stalled somewhat in recent years. The drop in time lost to industrial disputes at the beginning of the decade was offset by increases in 2004 and 2005. It is too early to say if this is the beginning of a new trend. What can be done, however, is to gain an understanding of recent stoppages by looking at the main areas of dispute, the jurisdictions in which the stoppages occurred, and how they were resolved.

# Highlights

*In this issue*

## ■ Converging gender roles ... p. 7

- In 2005, persons aged 25 to 54 spent a total of 8.8 hours a day working at their job and doing housework or other unpaid household tasks, up from 8.2 hours in 1986. For men, most of the increase came from unpaid work (up from 2.1 to 2.5 hours). For women, the entire increase was in the form of paid work (up from 3.3 to 4.4 hours).
- Women with children significantly increased their daily participation in paid labour, from 39% in 1986 to 45% in 2005. While only half of men (with and without children) participated in daily housework in 1986, roughly 7 in 10 did so by 2005.
- The number of dual-earner couples increased between 1986 and 2005, as did their average time spent on paid work and housework. By 2005, wives put in 46% of the total time couples spent at jobs and 62% of the time they spent on housework.
- The division of labour within dual-earner couples becomes more equal as wives bring in more personal income. When wives had an income of \$100,000 or more, each partner spent about 6.5 hours a day at paid work and 1.5 hours on housework.
- In addition to feeling more time-stressed, dual-earner women with children were significantly less satisfied with their work-life balance than dual-earner women without children, or dual-earner men with and without children.

## ■ Wives as primary breadwinners ... p. 20

- In 2003, women were primary breadwinners in 1.4 million dual-earner couples—29% of all such couples. These women tended to be older and more educated than their secondary-earner counterparts.
- In line with their age and education, primary-earner wives were found more frequently in managerial and professional occupations. They were also more likely to have a full-time job, work more paid hours per week, and have more years of experience.
- Although most primary-earner wives earned more than twice as much as their husbands, their earnings did not match those of primary-earner husbands. Similarly, their average family income lagged behind.

## ■ Education and earnings ... p. 28

- Over the last 25 years, technological advancement has increased the need for highly educated workers. In 2005, 72% of Canadians aged 25 to 34 had some type of postsecondary education, compared with 54% in 1980.
- As a result of strong commodity and real estate markets, the past five years have seen a shift from white-collar to blue-collar jobs, where young people with less education are more often employed. Although this change does not appear to have boosted the overall employment rate of young, less-educated men, it may have mitigated any further downward pressure on their employment rates.

- Coinciding with the recent movement toward blue-collar jobs, average real earnings have increased more for young, less-educated men than for any other group. (Men with a university degree actually saw theirs decline.) Nevertheless, the real earnings of these men are still below their 1980 levels, and the gap between them and their university-educated counterparts is still large.

## ■ Is the workplace becoming safer? ... p. 36

- Between 1990 and 2001, work injury claim rates declined 4.6% in Ontario (from 5.2 to 2.5 per 100 full-time equivalents) and 3.0% in British Columbia (from 6.1 to 4.1).
- Although injury rates declined more for men than for women over the period, women still had lower overall rates in both provinces.
- The service sector had lower injury rates than the goods sector in both provinces in 1990 and 2001, with B.C.'s rates continuing to be slightly higher than Ontario's in each category.
- In both provinces, injury rates continued to be highest for young workers aged 15 to 24 and lowest for workers over 50.

## ■ The GST credit ... p. 42

- In 2002/2003, the federal government collected \$30.6 billion from the GST (goods and services tax). The GST accounts for 70% of consumption tax revenue and 16% of federal government revenue. The government returned \$2.9 billion in GST credits to 9.1 million persons aged 16 and over in 7.5 million economic families.
- Almost two-thirds of those receiving a GST credit were major income recipients of economic families (including unattached individuals). Children still living with their parents accounted for another 21%. Although credits are designed to soften the burden of GST for families with lower incomes, only 26% of the total credit went to low-income families.

- Families with a GST credit received an average of \$389, which represented 5% of their total government transfers or 1% of pre-tax income. Thus the GST credit has only a minimal effect on the redistribution of income.

## ■ Increased work stoppages ... p. 51

- Work stoppages due to strikes and lockouts fell from an annual average of 754 in the 1980s, to 394 in the 1990s, to 319 in the 2000s. The time-loss ratio, which controls for the rise in employee numbers, also reveals an overall declining trend: from an annual average of 541 workdays lost per 1,000 employees in the 1980s, to 233 in the 1990s, to 203 in the 2000s.
- More recently, however, work stoppages have increased. In 2005 they totalled 261 compared with 221 in 2003. The 2005 stoppages involved 429,000 workers (a five-fold jump from 2003) and cost 4.1 million workdays (almost two and a half times the 2003 figure). Similarly, the time-loss ratio of 301 in 2005 was more than twice the 2003 level.
- Between 2003 and 2005, unions initiated about 84% of the 743 work stoppages (strikes) and 87% of the 9.1 million resulting lost workdays; the rest were initiated by employers (lockouts).
- Provincially, Quebec posted the largest share of strikes and lockouts (336 or 45%). At the industry level, approximately 29% of the strikes and lockouts occurred in manufacturing, followed by education, health and social services (21%).

## ■ What's new? ... p. 56

### ■ From Statistics Canada

Head-office employment

General Social Survey: Commuting times

The death of a spouse and the impact on income  
Education and labour market pathways of young adults



Employer pension plans (trusteed pension funds)  
 Culture sector employment in rural Canada  
 Employment and earnings among lone mothers  
 Canada's labour market at a glance  
 Census family income  
 Income of individuals

■ **From other organizations**

Working time over the 20th century  
 Accessibility and employment growth  
 Community unemployment and immigrants' health in Montreal  
 Internal labour markets and labour market restructuring

Attitudes to work and career progression (in French)  
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# Converging gender roles

Katherine Marshall

Families are the cornerstone of any society. Their supply of paid labour is vital to the economy, as is their unpaid labour in raising the next generation. The dynamics of who does which type of labour within families continue to change. Women's expanding economic role has been the main impetus for eroding the cultural idea that men should be primarily responsible for paid work while women look after unpaid household and family duties. Today's couples have a much more equal partnership in the sharing of financial, child care and household responsibilities.

Understanding the changing division of labour within families is crucial in developing effective policies. Employers may be well over the idea that women's earnings are simply pin money for the family, but accepting that men's work schedules are increasingly affected by home responsibilities, such as picking up children from daycare, staying home with a sick child, or taking parental leave, is relatively new. Changing workplace practices, such as on-site daycare and flexible work arrangements, as well as labour legislation such as parental, maternity and compassionate care leave confirm that "WLB (work-life balance) has emerged as a critical public policy issue in Canada" (HRSDC [2005?]). The increasing number of dual-earner families and a heavier overall workload make balancing a job and home life that much more difficult.

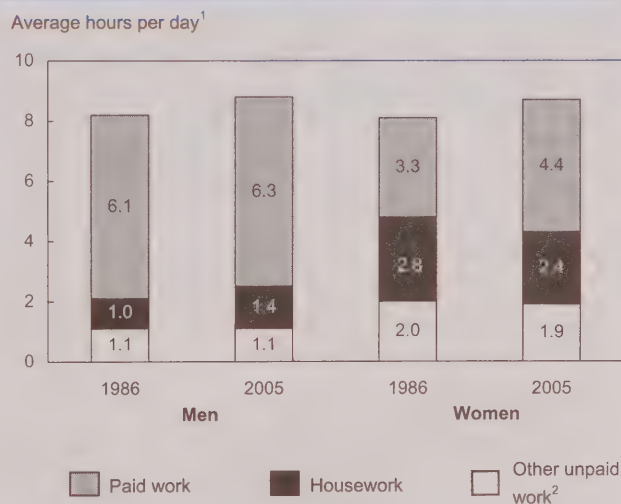
The division of labour within families is also of interest from a sociological point of view. Women's entrenched participation in the labour market was expected to launch "a revolution in the gendered division of labor," but the rate of change has been slow (Cooke 2004). Tension from multiple daily demands and a longer workday can arise when 'second-shift' duties are discussed and divided. An imbalance in the division of household labour has been linked to marital conflict, reduced physical and mental well-being, and lower wages (Cooke 2004; Coverman 1983).

Time-use surveys can illuminate overall trends in the hours men and women spend on paid work and housework, as well as on child care and other unpaid household labour. Time-use diaries permit analysis of the types of activities done on a daily basis, and for how long. The study targets those aged 25 to 54 as they are the most likely to be employed and have dependent children at home, leaving them challenged for time. The latter part of the article focuses on the hours of work, the division of labour, and the well-being of dual-earner families (see *Data sources and definitions*).

## More time at the office, particularly for women

The average daily time spent on paid work, housework and other unpaid household duties (including child care) for those aged 25 to 54 has increased steadily

**Chart A** Time spent on paid and unpaid work has shifted among those 25 to 54, particularly women



1 Numbers may not add due to rounding.

2 Primary child care and shopping for goods and services.  
Source: Statistics Canada, General Social Survey

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## Data sources and definitions

Every year since 1985, the **General Social Survey (GSS)** has interviewed Canadians aged 15 and over living in the 10 provinces on a wide range of social issues. Using a 24-hour diary, the GSS collected detailed information on time use in four different years using varying sample sizes: 1986 (16,400), 1992 (9,800), 1998 (10,700) and 2005 (19,600). Individual activities were recorded sequentially throughout the day and subsequently coded to an international listing. Each day of the week is sampled. Therefore, calculations are usually averaged over a 7-day period (see below). While the 1986 survey collected data during the months of November and December, the remaining cycles covered a 12-month period. Most time-use surveys include sections on the perception of time and indicators of well-being.

The **Labour Force Survey (LFS)** collects information on labour market activity every month during a one-week period from all persons 15 years and over. It includes questions about the usual and actual weekly hours spent at a person's main job and any other job. The LFS **participation rate** for a particular group (for example, women aged 25 to 54) is the labour force in that group expressed as a percentage of the population for that group.

Replacing the Family Expenditure Survey in 1997, the annual **Survey of Household Spending (SHS)** collects data on the expenditures, income and characteristics of families and individuals living in private households. The SHS category 'domestic help' includes, for example, housekeepers, cleaners, paid companions and housesitters.

**Paid work** (time use) includes the work activities of all jobs or businesses, while **related paid activities** include looking for work, delays at work, and coffee breaks. **Commute to work** is the total time spent travelling to and from the workplace. **Total paid work** covers paid work, related paid activities, and commuting.

**Core housework** (time use) includes meal preparation, meal clean-up, indoor cleaning, and laundry. Core activities are those that are most likely done on a daily basis and generally demand the most time. **Non-core housework** includes things such as outdoor cleaning, mending or sewing, interior or exterior maintenance and repair, gardening, pet and plant care, household paperwork, or unpacking groceries. **Total housework** consists of core and non-core activities.

**Primary child care** (time use) consists of activities directly involving children, such as feeding, helping, teaching, reading to, talking or playing with, medical care, and any related travel such as taking children to school or driving them to sports or other activities.

**Activity participation rate** (time use) indicates the proportion of the population (or sub-population) that reported spending some time on the activity on diary day. The participation rate is a daily rate and, unless otherwise specified, is an average over a seven-day week.

**Average time spent on activities** (time use) of the population or a sub-population refers to the total time all respondents reported spending on a given activity divided by the population, and averaged over a seven-day week. The time spent by participants refers to only those who participated in that activity on diary day, but again averaged over seven days.

**Dual-earners** are defined here as married or common-law couples in which the main activity of both partners in the previous seven days was 'employed.' Both partners had to be currently living in the same household and not on vacation from their job during the previous week. Since the analysis focuses on the division of labour by sex, same-sex couples were excluded.

**Total paid work and housework time within couples** is the sum of minutes both partners spent on paid work and related paid activities, and on core and non-core housework, on diary day. This calculation uses the 24-hour diary reporting for the respondent's time, and the time-related questions asked of the respondent for their partner's time. For example, if the respondent reported that their partner worked on diary day, a follow-up question asked the exact start and end times of all shifts worked on that day. (Since respondents were not asked to report any commute time for their partners, commute time for both partners is excluded from the total paid work calculation.)

Respondents were also asked to estimate the total number of hours their partner spent on core and non-core housework in the previous week. Therefore, average daily time spent on housework by the partner was calculated by adding the total weekly core and non-core hours, dividing this amount by 7, and then (based on established housework activity patterns), multiplying by 0.11 if diary day was a weekday, and 0.22 if diary day was a Saturday or Sunday. Calculations of the average time both partners spent on paid and unpaid work at the household level are very consistent with individual level data—that is, using only diary data for respondents by sex. Knowing the work dynamic within a couple is important for understanding the individual work pattern and well-being of each of the partners.

The **target population** includes all respondents aged 25 to 54 at the time of the survey. This is the core working-age group and also the group most likely to have dependent children living at home, thus increasing the likelihood of their having significant employment and home responsibilities. In order to clearly examine the amount of paid and unpaid labour done by those living alone or in a couple, households with extra members, such as grandmothers or boarders, were excluded.

over the past two decades, rising from 8.2 hours in 1986 to 8.8 hours in 2005. All of the increase comes from paid labour, which rose from an average of 4.7 hours per day in 1986 to 5.4 hours in 2005, while unpaid work dropped slightly. These findings refute the theories that advanced technology and growth in productivity capacity would invariably lead to increased leisure time.<sup>1</sup>

Both men and women have added to their overall workday since 1986 (Chart A). Most of the 0.6 hour increase for men has come from unpaid work, rising from 2.1 to 2.5 hours, although their paid labour also rose (from 6.1 to 6.3 hours). The 0.7 hour increase for women has come entirely from paid work (3.3 to 4.4 hours), despite a half hour drop in unpaid work (4.8 to 4.3 hours). Although gender differences in the division of labour are still evident, they are slowly breaking down.

### Converging labour force participation rates

The jump in the average time women spend in paid labour is attributable not only to time spent on the job, but also to an increase in their participation rate. Canadian women have one of the highest participation rates in the world, a rate that is converging with men's. For example, while the difference in labour force participation rates for men and women aged 25 to 54 was 24 percentage points in 1986 (94% for men versus 70% for women), in 2005 it stood at 10 points (91% versus 81%) (Chart B). Time-use data on average daily participation rates show a similar trend,

with the women's rate rising from 44% in 1986 to 51% in 2005, and men's decreasing from 68% to 65% (Table 1).<sup>2</sup>

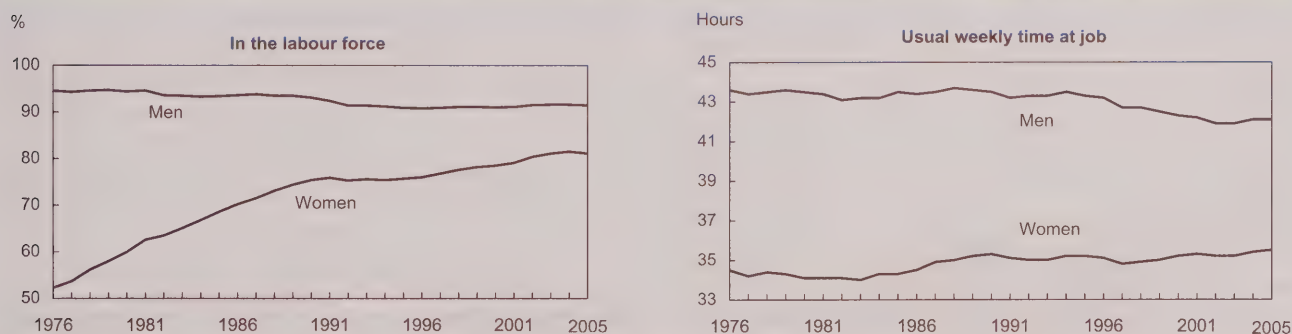
### Men's participation in housework up, women's down

The proportion of those doing some housework daily, be it making sandwiches for lunch, vacuuming, or taking out the garbage, increased from 72% in 1986 to 79% in 2005. However, this increase is entirely attributable to men, whose participation rose from 54% to 69%, while women's remained steady at around 90%. Changes in the daily participation rate for core housework (meal preparation, meal clean-up, indoor cleaning, and laundry) are the most noticeable—40% to 59% for men, and 88% to 85% for women.

Even though the proportion of people doing housework of some kind has increased, the amount of time spent at it has decreased (from an average of 2.7 hours per day in 1986 to 2.5 hours per day in 2005) (Chart C). All of the decrease comes from core housework. Labour-saving devices such as dishwashers, and semi-prepared or pre-packaged food items (such as pre-washed bags of salad, already peeled carrots, or frozen dinners) as well as numerous take-out options, may be helping to cut down the time spent in kitchens.

Still, given the trend toward ever bigger homes,<sup>3</sup> it seems puzzling to witness a reduction in time spent on housework. Canadians are not alone in this; a remarkably similar trend has been observed in the United

**Chart B Women have increased their labour force participation dramatically, but men still put in more hours on the job**



Source: Statistics Canada, Labour Force Survey

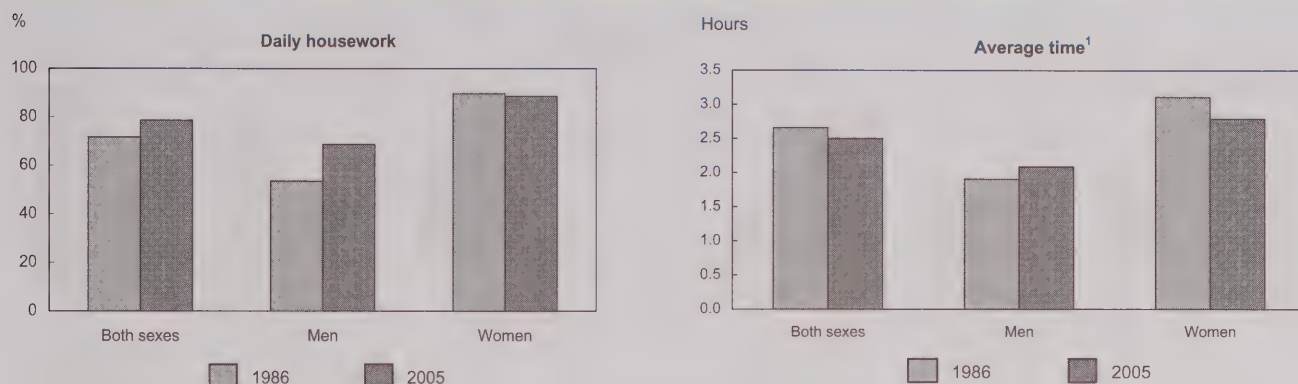
**Table 1 Participation in, and time spent on, paid work, housework and other unpaid work**

	Men 25 to 54				Women 25 to 54			
	1986	1992	1998	2005	1986	1992	1998	2005
Average hours per day (population) <sup>1</sup>								
<b>Total paid and unpaid</b>	<b>8.3</b>	<b>8.6</b>	<b>8.9</b>	<b>8.8</b>	<b>8.1</b>	<b>8.4</b>	<b>8.5</b>	<b>8.8</b>
Paid work and related	6.1	6.1	6.3	6.3	3.3	3.6	4.0	4.4
Work	4.9	5.1	5.1	5.3	2.8	3.0	3.2	3.7
Related activities	0.7	0.6	0.6	0.4	0.3	0.3	0.4	0.3
Commute	0.5	0.5	0.5	0.6	0.3	0.3	0.3	0.4
Housework	1.0	1.4	1.4	1.4	2.8	2.9	2.6	2.4
Core	0.4	0.5	0.7	0.7	2.5	2.3	2.2	1.9
Non-core	0.6	0.9	0.7	0.7	0.3	0.6	0.5	0.5
Other unpaid	1.1	1.1	1.2	1.1	2.0	1.9	2.0	1.9
Child care	0.4	0.4	0.5	0.5	0.9	1.0	1.0	1.0
Shopping and services	0.7	0.6	0.7	0.6	1.1	0.9	1.0	0.9
Average hours per day (participants) <sup>1</sup>								
<b>Total paid and unpaid</b>	<b>8.7</b>	<b>8.9</b>	<b>9.1</b>	<b>9.2</b>	<b>8.3</b>	<b>8.5</b>	<b>8.6</b>	<b>8.9</b>
Paid work and related	9.0	9.4	9.5	9.7	7.6	8.0	8.2	8.5
Work	7.7	8.1	8.1	8.5	6.7	6.9	7.1	7.5
Related activities	1.4	1.2	1.3	1.1	1.1	1.0	1.0	1.1
Commute	0.9	0.8	0.9	1.0	0.7	0.7	0.8	0.9
Housework	1.9	2.0	1.8	2.1	3.1	3.1	2.8	2.8
Core	1.1	1.0	1.0	1.2	2.9	2.6	2.4	2.3
Non-core	2.2	2.3	2.2	2.5	1.3	1.6	1.4	1.8
Other unpaid	2.4	2.1	2.1	2.2	2.9	2.8	2.8	2.9
Child care	1.5	1.6	1.8	1.8	2.1	2.2	2.3	2.5
Shopping and services	2.3	1.8	1.7	1.9	2.4	2.0	1.9	2.0
Participation (%)								
<b>Total paid and unpaid</b>	<b>94</b>	<b>96</b>	<b>98</b>	<b>96</b>	<b>98</b>	<b>99</b>	<b>99</b>	<b>98</b>
Paid work and related	68	65	67	65	44	45	48	51
Work	64	63	63	62	41	43	46	49
Related activities	46	48	51	39	29	33	36	30
Commute	61	57	59	58	39	40	43	46
Housework	54	67	77	69	90	93	94	89
Core	40	52	69	59	88	91	92	85
Non-core	26	38	36	31	23	37	42	35
Other unpaid	46	51	56	49	69	68	71	66
Child care	23	28	30	27	44	44	43	39
Shopping and services	32	33	39	31	45	47	51	45

1 Time averaged over seven days; numbers may not add due to rounding.

Source: Statistics Canada, General Social Survey



**Chart C Overall, more people are doing some daily housework, but they are spending less time at it**

1 By those who did some housework.

Source: Statistics Canada, General Social Survey

States. Between 1975 and 1995 the average weekly hours Americans spent on housework dropped from 15.5 to 13.7. Furthermore, “women’s and men’s hours spent in housework have converged over the period, primarily due to the steep decline in women’s hours of housework” (Bianchi et al. 2000). One reason for the overall decline could be today’s service-oriented economy. From take-out meals to snow removal, groundskeeping and housecleaning, people buy many goods and services once produced in the home. Housework standards may also be falling and people are less bothered if their house fails the ‘white-glove’ dust test. In the same vein, people’s priorities may have changed as to how they want to spend their time (Bianchi et al. 2000).

Overall, participation rates for other types of unpaid labour—primary child care and shopping for goods and services—have remained relatively stable over the past 20 years. The average time spent has trended upward for child care and downward for shopping. However, the participation rate and time spent on child care for those with children at home shows a more noticeable increase, particularly among men (see *Sharing the caring*).

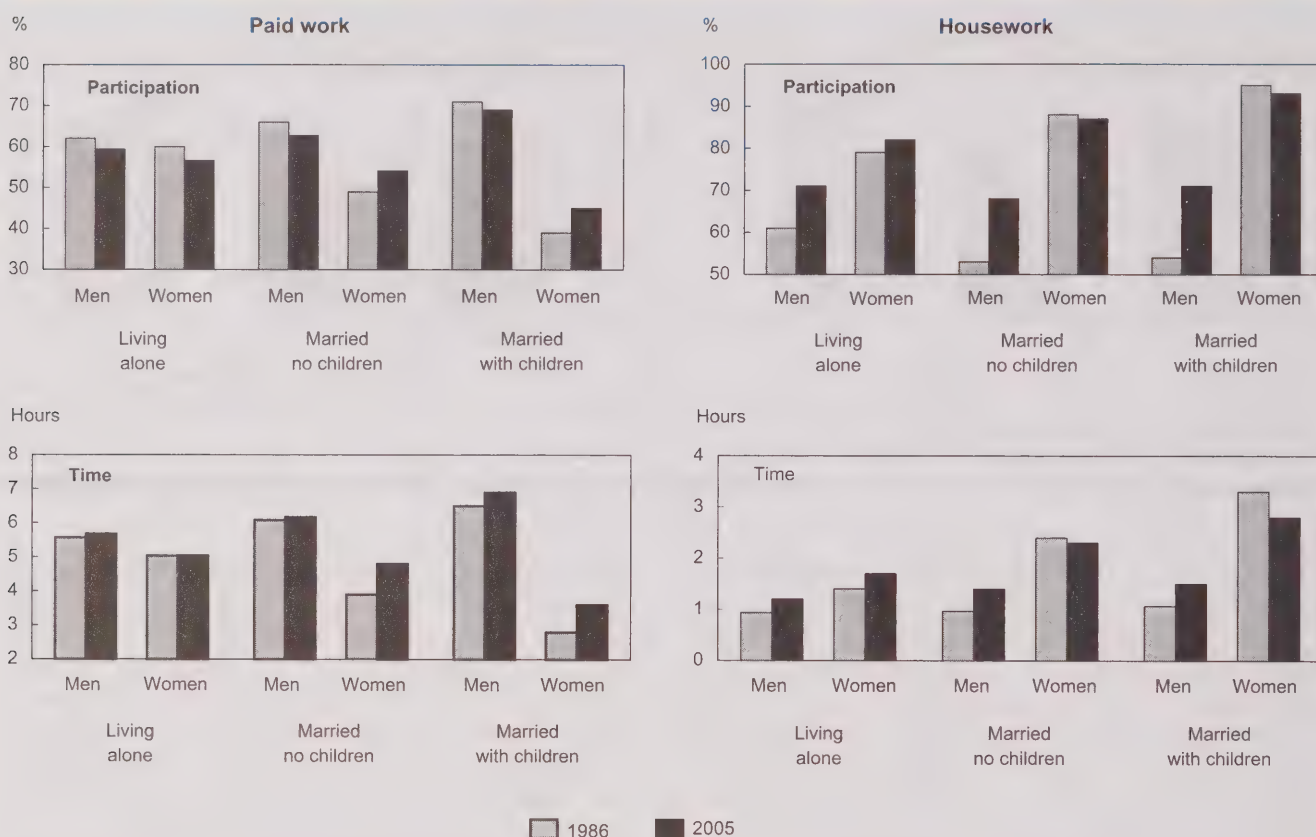
### Marriage today less likely to alter women’s labour market behaviour

In both 1986 and 2005, married men with children had appreciably higher daily participation rates for paid labour than men living alone—roughly 70% versus

60% (Chart D).<sup>5</sup> On the other hand, in 1986, married women (with or without children) were significantly less likely to participate in paid labour (39% and 49% respectively) than those living alone (60%). By 2005, however, no statistically significant difference was seen between married women without children and those living alone. And while the difference between married women with children and those living alone was 21 percentage points in 1986, the difference in 2005 was down to 12 points.

Similar patterns emerge for daily hours spent on paid work. While married men with children spent significantly more time on paid work than men living alone in both 1986 and 2005, women with children spent significantly less than their counterparts living alone. However, while paid work hours were significantly different in 1986 for women living alone and married women without children (5.0 and 3.9 respectively), no significant difference was evident in 2005 (5.0 and 4.8).

Married women, with or without children, significantly increased the average time they spent at paid labour between 1986 and 2005. Therefore, although married men (with or without children) still spent more time at paid work than women in the same circumstances, the difference has narrowed. For example, married men without children spent an average of 2.2 hours more time at paid labour than women in 1986 (6.1 versus 3.9 hours), but by 2005 the difference had dropped to 1.4 hours (6.2 versus 4.8).

**Chart D Daily participation in, and time spent on, paid work and housework, by living arrangements**

Note: Except paid work for those living alone, all other differences between men and women are statistically significant.  
Source: Statistics Canada, General Social Survey

### More married men now doing housework

In all family types, daily participation rates for housework continue to be significantly higher for women than for men. However, the gap is narrowing. For example, among married men with children, the participation rate rose from 54% to 71%. Furthermore, while the presence of a wife lessened men's involvement in housework in 1986 (single men had a participation rate of 61%, and married men 53%), 2005 saw roughly 7 in 10 married men, both with and without children, participating in housework. The increase in husbands' participation is a logical reaction to the reality that most wives are now engaged in paid labour, and for longer hours, and therefore have less time to

do housework. The significant increase in participation among men living alone may be partly attributable to changing cultural norms, whereby both men and women have been taught life skills formerly reserved for the opposite sex. "It is likely more acceptable for men to cook and clean, indeed, welcomed, for men to show competence at making a home-cooked meal, for example" (Bianchi et al. 2000).

From the standpoint of time, married women, particularly those with children, continue to do significantly more housework than married men, but the overall difference has lessened. In 1986, women with children did 2.2 hours more per day than their male counterparts (3.3 versus 1.1 hours), with the difference



## Sharing the caring

As the roles of men and women with respect to paid labour and household maintenance continue to converge, so too does the responsibility for nurturing children. Once excluded from delivery rooms, men are now not only labour coaches, but active participants in the multitude of tasks associated with caring for babies and young children. As with housework, a key impetus behind men's increasing role in child care is the increasing participation of women in the labour force. In 1976, 36% of couples with dependent children at home were dual-earner families; by 2005 the proportion had increased to 69% (Table A). Greater sharing of financial responsibility has led to "a pattern of convergence whereby women and men increasingly come to see themselves not only as co-parents but as co-providers for their children." (Daly 2004, p. 7). To some extent this attitude has become reality. Although still less involved in primary child care than women, men have significantly increased their participation. Primary care includes direct

**Table A Husband-wife families with children under 16 at home**

	1976		1986		1992		2005	
	'000	%	'000	%	'000	%	'000	%
<b>Total</b>	<b>5,663</b>	<b>100</b>	<b>5,473</b>	<b>100</b>	<b>5,532</b>	<b>100</b>	<b>5,485</b>	<b>100</b>
Dual-earner	2,041	36	2,905	53	3,190	58	3,758	69
Single-earner <sup>1</sup>	3,041	54	1,796	33	1,397	25	1,147	21
Mother at home	2,991	98	1,720	96	1,278	91	1,022	89
Father at home	49	2	76	4	119	9	125	11
Other <sup>2</sup>	581	10	772	14	945	17	580	11

1 Stay-at-home parent must not be looking for work, but must be able to work and not attending school.

2 Includes no-earner families and single-earner families with an unemployed spouse.

Source: Statistics Canada, Labour Force Survey

**Table B Average time<sup>1</sup> spent on primary child care by married persons aged 25 to 54**

	Men		Women	
	1986	2005	1986	2005
	Hours			
<b>With children under 19 at home</b>	0.6(*)	1.0*(*)	1.4	2.0*
At least one child under 5	1.0(*)	1.6*(*)	2.6	3.4*
All children 5 to 18	0.3(*)	0.6*(*)	0.7	1.2*
	Participation rate (%)			
<b>With children under 19 at home</b>	38(*)	52*(*)	67	72*
At least one child under 5	57(*)	73*(*)	92	94
All children 5 to 18	25(*)	40*(*)	52	60*

1 Population.

\* Significant difference with 1986 at the .05 level or less.

(\*) Significant difference between men and women at the .05 level or less.

Source: Statistics Canada, General Social Survey

involvement such as reading to children, taking them to the park, helping with homework, or driving them to activities (see *Data sources and definitions*). For example, while just over 90% of women with pre-school children reported doing primary child care in both 1986 and 2005, men's involvement jumped from 57% to 73%. However, unlike housework where the average time spent has increased for men but dropped for women, time spent on child care has increased for both sexes. Overall, in 2005, fathers with children under 19 at home spent about 1.0 hour per day on child care (up from 0.6 in 1986) and mothers 2.0 hours (up from 1.4 hours) (Table B).<sup>4</sup> Despite the increasing time spent on paid labour, both have also increased their direct involvement with their children. However, studies have suggested that fathers and mothers provide different types of care. While "there is a trend of convergence in the amount of time" mothers and fathers are involved with their children, "women continue to carry most of the responsibility dimension that involves the planning, scheduling, orchestrating and coordination of family activities" (Daly 2004, p. 12).

Another indication of change is the number of families with a stay-at-home father. Although families with a stay-at-home parent have declined substantially since 1986, the proportion with a father in this role has increased from 4% in 1986 to 11% in 2005 (Table A). Furthermore, since an amendment to the Employment Insurance Act in 2000 increased the length of paid parental leave from 10 to 35 weeks, fathers' participation in the program has risen from 3% to 11%. The more than 1 in 10 fathers now taking a formal employment leave to be home with their newborn is not only a "statistically significant increase, but also a socially significant one" (Marshall 2003).



decreasing to 1.3 hours by 2005 (2.8 versus 1.5 hours). This narrowing is the result of married men with children spending significantly more time on housework, and married women spending significantly less.

## Dual-earners

The steady rise in women's labour force participation means that in most couples, even those with dependent children at home, both spouses are now employed. The proportion of dual-earners among husband-and-wife families with children under 16 at home rose from 36% in 1976, to 58% in 1992, to 69% in 2005 (see *Sharing the caring*). Without a doubt, juggling home and work responsibilities is more challenging when both parents are employed. Society has a vested interest in ensuring that these individuals are able to meet this challenge, since the consequences of being overburdened affect not only the health and well-being of individuals and their family, but also the ability to be effective in the workplace. Unmanageable responsibilities in either sphere can have negative spillover effects, such as inattentiveness at home or lack of productivity at the workplace (Daly 2004).

Not only has the number of dual-earners increased since 1992, so too has the average daily amount of time these couples spend on paid work and housework combined (up 0.5 hours per day, a result of 0.7 hours more paid work but 0.2 hours less housework) (Table 2).<sup>6</sup> This net change within couples was due to an increase in husbands' paid work and housework (0.3 hours and 0.1 hours respectively), and an increase in wives' paid work and decrease in housework (0.4 hours and -0.2 hours respectively).<sup>7</sup>

In both 1992 and 2005, each partner in dual-earner couples did 50% of the combined paid work and housework each day (Table 3). However, wives did 45% of total paid work but 65% of housework in 1992. By 2005 these proportions stood at 46% and 62%.

As in the general population, men in dual-earner families have increased their participation in housework (from 70% in 1992 to 74% in 2005), while the women's rate has dropped (from 94% to 90%).

## Children widen the gap...

Several factors are associated with who does what in a dual-earner family, and how much time they spend. For example, school-aged children at home add an

average of 1.2 hours to a family's workday, pushing it to more than 8 hours for both parents (Table 3). However, fathers tend to add both paid work and housework (0.4 and 0.3 hours respectively) compared with men without children at home, whereas women add only housework (0.6 hours more than women without children).

## ... and education narrows it

When only the wife in a couple has a university degree, her share of housework decreases to 59%, compared with 62% overall. Although not a strong finding, this is consistent with other studies, which have found that "increases in wife's education, as a proxy for wage rate, tend to be associated with an increased share of housework for the husband" (Anxo and Carlin 2004, p. 30). Also, lower levels of education for both partners add to the length of the total workday (paid work and housework). Families in which neither partner graduated from university worked an average 16.3

**Table 2 Participation in, and time spent on, paid work and housework in dual-earner families**

	Participation		Time per day <sup>1</sup>	
	1992	2005	1992	2005
	%		Hours	
<b>Total</b>				
Both	99	99	15.3	15.8
Husband	99	98	7.7	7.9
Wife	100	99	7.6	7.8
<b>Paid work</b>				
Both	72	72	11.5	12.2*
Husband	71	73	6.3	6.6
Wife	72	70	5.2	5.6
<b>Housework</b>				
Both	82	82	3.8	3.6
Husband	70	74	1.3	1.4
Wife	94	90*	2.4	2.2
<b>Wife's share</b>	50	50		
Paid work	45	46		
Housework	65	62*		

1 Figures may not add due to rounding. Based on household reporting; participation based on respondent reporting.

\* Significantly different from 1992 at the .05 level or less.

Source: Statistics Canada, General Social Survey

**Table 3 Total average time spent on paid work and housework within dual-earner couples**

	Total paid and housework			Paid			Housework			Wife's proportion of time		
	Both	Hus-band	Wife	Both	Hus-band	Wife	Both	Hus-band	Wife	Total	Paid	House-work
	Hours									%		
<b>Total dual-earners</b>	<b>15.8</b>	<b>7.9</b>	<b>7.8</b>	<b>12.2</b>	<b>6.6</b>	<b>5.6</b>	<b>3.6</b>	<b>1.4</b>	<b>2.2</b>	<b>50</b>	<b>46</b>	<b>62</b>
No children under 19 at home (ref)	15.2	7.6	7.6	12.1	6.4	5.7	3.1	1.2	1.9	50	47	61
At least one under 5	15.3	7.7	7.6	11.8	6.4	5.5	3.5*	1.3	2.1*	50	46	62
All between 5 and 18	16.4*	8.3*	8.2*	12.5	6.8*	5.7	4.0*	1.5*	2.5*	50	45	63
Both have university degree (ref)	15.2	7.6	7.6	12.2	6.4	5.8	3.1	1.2	1.9	50	47	60
Wife only	15.0	7.6	7.4	11.5	6.2	5.3	3.5*	1.4	2.1	49	46	59
Husband only	14.9	7.5	7.3	11.6	6.3	5.3	3.3	1.2	2.1	49	46	62
Neither have a degree	16.3*	8.2*	8.1*	12.5	6.8	5.7	3.8*	1.4*	2.4*	50	46	62
Wife's income <sup>1</sup>												
Less than \$30,000 (ref)	16.4	8.3	8.1	12.5	7.0	5.5	3.9	1.2	2.7	50	44	68
\$30,000 - \$59,999	15.4*	7.6	7.7	12.1	6.4	5.6	3.3*	1.2	2.1*	50	47	64*
\$60,000 - \$99,999	15.6	7.9	7.7	11.9	6.4	5.5	3.6	1.5	2.2*	49	46	60*
\$100,000 or more	16.3	8.3	8.1	13.2	6.7	6.5	3.2 <sup>E</sup>	1.6 <sup>E</sup>	1.6* <sup>E</sup>	49	49*	50*
Husband's income <sup>1</sup>												
Less than \$30,000 (ref)	16.0	8.4	7.6	12.1	6.5	5.6	3.9	1.9	2.1	47	46	52
\$30,000 - \$59,999	15.9	8.0	7.9	12.3	6.5	5.8	3.6	1.5	2.1	50	47	59
\$60,000 - \$99,999	15.5	7.9	7.6	11.7	6.2	5.5	3.8	1.7	2.1	49	47	55
\$100,000 or more	16.1	8.1	8.0	12.6	6.8	5.9	3.5	1.4	2.1	50	47	61
Both full-time (ref)	16.1	8.0	8.1	12.5	6.6	5.9	3.5	1.4	2.1	50	47	60
Husband full-time, wife part-time	14.1*	8.0	6.1*	10.3*	6.9	3.4*	3.9	1.1*	2.7*	43*	33*	71*
Husband part-time, wife full-time	12.2*	4.2*	8.0	8.7*	2.7* <sup>E</sup>	6.0	3.5	1.5	2.0 <sup>E</sup>	66*	69*	58

<sup>1</sup> Based on respondent information only as the income of the spouse was not collected.

\* Significantly different from reference group (indicated by 'ref') at the .05 level or less.

Source: Statistics Canada, General Social Survey, 2005

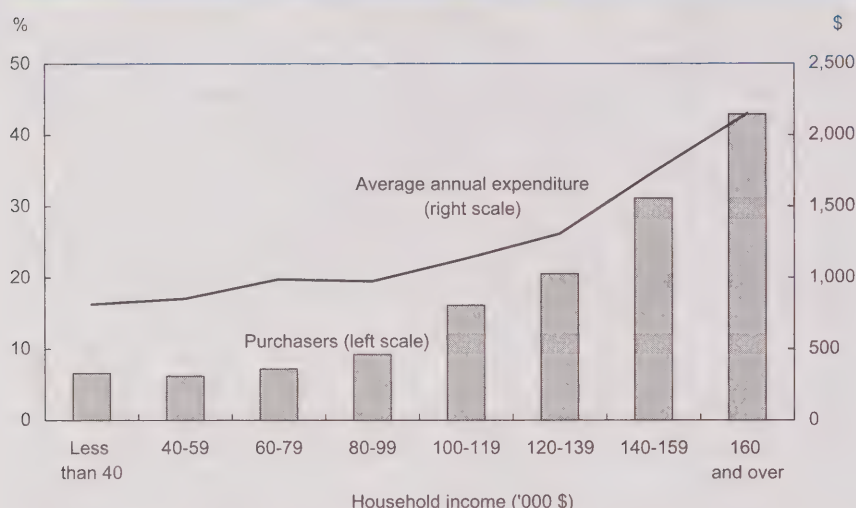
hours per day compared with 15.2 hours for those in which both had a university degree. Most of the added time came from housework.

### Parity in labour when wives have high income

High personal income, for either sex, is associated with spending more time at a job and less on housework. For example, compared with women whose annual income was less than \$30,000, those with \$100,000 or more did one hour more of paid work, and one hour less of housework per day. (Both did an average of 8.1 hours of total work per day.)

Longer job hours often bring higher earnings, which in turn can offer some relief from housework by providing the means to hire someone else to do it. In 2004, only 7% of households with income less than \$40,000 paid for domestic help, spending an average of \$813. This compared with 43% of households with \$160,000 or more, who spent \$2,150 (Chart E).

When wives have an income of \$100,000 or more, the division of paid labour and housework between partners is more likely to be split equally. In these couples, each partner spent about 6.5 hours per day on paid work and 1.5 hours on housework.

**Chart E Higher income households are more likely to hire domestic help**

Source: Statistics Canada, Survey of Household Spending, 2004

Furthermore, a wife's income is likely to influence the husband's time spent on housework as well as her own. For him, time spent doing housework rises along with her income, while for her, the time falls. On the other

hand, regardless of her husband's income level, a wife's time spent on housework stays the same. These findings partly support the 'relative resources' theory of the division of housework, which suggests that partners with relatively high education and income have more power to get out of doing housework (Bianchi et al. 2000). Other research has shown that high-income households are more likely to buy domestic help, especially if the wife is the primary earner. The latter are twice as likely to hire help than high-income households in which the husband is the main earner (Palameta 2003).

Finally, even though dual-earner partners working full time both contribute 8 hours of total labour each day, husbands are more likely than wives to spend more time at a job (6.6 versus 5.9 hours) and less time on housework (1.4 versus 2.1 hours). Past research has found that

**Table 4 Indicators of well-being for couples aged 25 to 54**

	Satisfied with work-life balance		Not time stressed		Satisfied with life generally	
	Men	Women	Men	Women	Men	Women
%						
<b>Husband sole earner</b>						
No children under 19	78	...	64(*)	75	84	85
At least one under 19	69 *	...	61	55*	82	85
<b>Wife sole earner</b>						
No children under 19	...	82	79(*)	58	74	83
At least one under 19	...	73	77(*)	59	80	81
<b>Dual-earners</b>						
No children under 19	78	76	62(*)	53	88	88
At least one under 19	77(*)	67*	58(*)	45*	87	86
Both full-time	77(*)	69	60(*)	45	87	87
Husband full-time, wife part-time	78	86	57	65	89	88
Wife full-time, husband part-time	F	61	F	F	F	88

\* Significant difference between those with and without children at the .05 level or less.

(\*) Significant difference between men and women at the .05 level or less.

Source: Statistics Canada, General Social Survey, 2005



not only are wives in these families more likely to do most of the housework, but they also feel most responsible for anticipating, planning and organizing what needs to be done (Marshall 1993). Findings show that husbands or wives who work part time and have a spouse working full time have a shorter overall work-day (paid work and housework) than their spouse. However, many are likely spending a considerable amount of time on child care.

### Although time-stressed, employed parents satisfied with life overall

Both children and work arrangements within families influence work-life balance (WLB) satisfaction and stress caused by lack of time. Sole earners in couples with children at home had some of the lowest WLB satisfaction rates (69% for sole-earner fathers and 73% for mothers) (Table 4). Dual-earner fathers reported the highest satisfaction rate (77%), significantly higher than dual-earner mothers, who had the lowest (67%).

Men and women in dual-earning families, with and without children, feel most stressed about not having enough time. Given that children require a great deal of time and energy, it is not surprising to find that when both parents are employed, only 58% of fathers and 45% of mothers did not feel stressed for lack of time. Except in couples with dependent children and the husband as sole earner, women reported being significantly more stressed for time than men.

Interestingly, compared with other women, those in dual-earner couples and working part time express the highest WLB satisfaction (86%), are some of the least

time-stressed (65%), and have a high overall life satisfaction rate (88%). On the other hand, women in dual-earner couples working full time are much less likely to feel satisfied with their WLB (69%) and more likely to feel pressed for time (only 45% did not feel time-stressed). However, despite the pressure of having children at home and each partner having a paid job, dual-earner men and women are the most likely to report high levels of satisfaction with their life as a whole.

### Parenting and long hours more burdensome for women

Not surprisingly, the longer a couple spends on an average weekday working at their jobs and doing housework, the more difficult it is to find balance in life with time enough to accomplish everything.<sup>8</sup> Women generally tend to feel more time-stressed than men, regardless of length of workday or presence of children (Table 5). For example, among couples with the longest workday and children at home, two-thirds of the women felt time-stressed compared with one-half of the men. Research has found that mothers, regardless of employment status, consistently feel more time-crunched than fathers (Zukewich 2003).

Longer workdays and the presence of children also affect women more than men in terms of WLB satisfaction. Only 52% of women with children in couples with long hours felt satisfied with their WLB, the lowest rate overall. In contrast, 71% of their male counterparts were satisfied. However, although overall life satisfaction fell somewhat as the workday lengthened

**Table 5 Indicators of well-being for dual-earners by combined length of workday**

	Satisfied with work-life balance		Not time-stressed		Satisfied with life generally	
	Men	Women	Men	Women	Men	Women
<b>No children under 19 at home</b>						
Less than 18 hours	77	74	69	51 (*)	90	85
18.0 to 21.9	78	79	64	53	87	89
22 or more	77	66	50*	50	83	84
<b>With children under 19 at home</b>						
Less than 18 hours	80	73	61	49 (*)	95	89
18.0 to 21.9	80	68 (*)	61	42 (*)	86	85
22 or more	71	52*(*)	49*	36*(*)	86	80

\* Significantly different from couples with less than 18 hour day and no children at the .05 level or less.

(\*) Significantly different from men at the .05 level or less.

Source: Statistics Canada, General Social Survey, 2005

for both men and women in dual-earner families (with or without children), the difference was not significant, and the vast majority (80% or more) felt satisfied with their life as a whole.

### Conclusion

While women's entry into the job market has been dramatic, men's entry into housework has been gradual, prompting some to call the latter a 'stalled revolution' (Cooke 2004). However, this study shows that, although gender differences persist in the division of labour, they are steadily diminishing. Since 1986, of the total time spent on paid and unpaid work, women aged 25 to 54 have proportionally increased their average daily time at a job (4.4 hours of 8.8 in 2005), while men have increased their time on housework (1.4 of 8.8 hours in 2005). As women's job attachment has increased, so too has men's involvement in housework and child care. Women's increasing hours in paid labour (and thus income), combined with "normative changes in the direction of equality and sharing" (Beaujot 2006, p. 24) is likely to further reduce gender differences in the division of labour in the future.

However, not only are more men and women sharing the economic and domestic responsibilities in families, but most are also increasing the length of their paid workday. This has helped position work-life balance among the top 10 issues in collective bargaining. It has risen in importance because of the "increased recognition of the costs of work-life imbalance in terms of workplace injury rates and the general health of workers, as well as the development and well-being of children and aging parents" (Canadian Association of Administrators of Labour Legislation 2002, p. 4). Dual-earner couples who worked long days doing their job plus housework and who had dependent children at home were less satisfied with their work-life balance. They also felt more time-stressed, particularly women. However, despite these stage-of-life pressures, the majority of dual-earner husbands and wives felt satisfied with their life as a whole.

Increasingly, employees are legally entitled to various kinds of paid and unpaid leave for family responsibilities. As well, more workplaces are offering flexible work arrangements, health promotion and employee assistance programs, and other family support such as on-site child care. It has been shown that employees

with flextime arrangements feel considerably less time-stressed than those without this benefit (Fast and Frederick 1996). In short, changing work arrangements in the home are inspiring alternative work arrangements at the office.

### Perspectives

#### ■ Notes

- 1 For a discussion of the different theories of leisure, see Gershuny and Fisher (2000).
- 2 While both the GSS and the LFS show women's average hours at paid work increasing, the LFS shows men's hours falling but the GSS shows them increasing. It is difficult to explain this difference, but some of it may be due to the different collection methods of the two surveys (see *Data sources and definitions*).
- 3 According to the census, the average number of rooms per dwelling increased from 5.8 in 1986 to 6.3 in 2001. Although square footage is not collected, this increase does suggest larger homes.
- 4 Average daily time spent on primary child care for participants has also steadily increased.
- 5 Married couples also include common-law couples.
- 6 A comparison of dual-earners couples from the first time use survey in 1986 was not possible since information about spouse's main activity was not collected.
- 7 The increase in paid work between 1992 and 2005 would have been larger if commuting to work had been included. This activity increased during this time but was not part of the calculation of work time within dual-earner couples (see *Data sources and definitions*).
- 8 This section looks at the total paid work and housework time couples do on an average weekday (Monday through Friday). This is arguably the most hectic part of the week. Women's total labour as a proportion of the couple's total work day (paid work and housework combined) was around 50% for all lengths of days (6 hours of a 12-hour day, or 10 hours of a 20-hour day).

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# Wives as primary breadwinners

Deborah Sussman and Stephanie Bonnell

One of the most dramatic transformations in the labour market in recent decades has been the tremendous growth in the labour force participation of married women. As a result, dual-earner, husband-and-wife families are quickly becoming the norm, shattering the image of the 'traditional' family in which the husband is the only breadwinner (Winkler 1998).

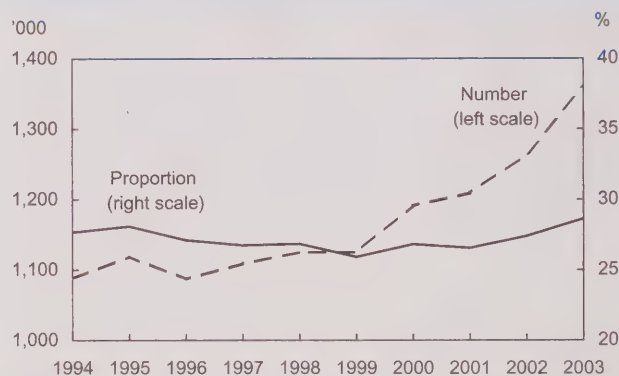
Reasons for the sustained increase in dual-earner couples are many, including the rise in women's educational attainment, the increase in their full-time employment rate, and expanded occupational opportunities. Other reasons, particularly for couples with children, involve increased acceptance of alternative work arrangements (flexible work hours, compressed work schedules, telework), expanded childcare options, and changes to parental leave. Together these factors have improved women's access to better-paying jobs and their ability to rise in the ranks. While for some couples the rising cost of living may have made two incomes a financial necessity, for others it may be a matter of both spouses pursuing their own interests or aspirations.

One notable corollary has been an increase in wives earning more than their husbands. Between 1967 and 1982, the proportion of wives who were primary breadwinners rose from 11% to 18% and hovered around 19% throughout most of the 1980s. The steady rise was likely the joint effect of women's long-term movement into higher-paying managerial and professional occupations (Hughes 1995), more women working full time, and better maternity benefits, combined with the much slower rise in men's average earnings over the period. During the recession of the early 1990s, the proportion of women who were primary

earners jumped to 25%,<sup>1</sup> mainly because men in high-wage and manufacturing jobs experienced periods of unemployment (Crompton and Geran 1995).

The proportion continued at approximately 1 in 4 dual-earner couples for the rest of the decade even as employment levels improved, hitting a high of 29% in 2003, or about 1.4 million couples (Chart A). The continued rise suggests that women in the role of primary breadwinner is not likely a temporary phenomenon resulting from a recessionary period.<sup>2</sup>

**Chart A** The number of dual-earner couples with primary-earner wives has continued to grow, while the proportion has remained stable



Source: Statistics Canada, Survey of Labour and Income Dynamics

## Challenges facing less traditional couples

This reversal of traditional earnings patterns may come at a price, however. The distribution of household earnings between spouses has been found to affect gender roles, spending patterns, and household decision making. Although findings have been mixed,

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women's share of household income can be an important determinant in the decision to purchase home services such as cleaning or child care (Palameta 2003). This is an example of the persistence of traditional roles, since the income of these women is being used to buy services that reflect women's traditional role. Another study found that among couples in which the wife outearned the husband by more than 50%, the husbands did more housework, although their wives still did the lion's share (Tichenor 1999). Moreover, wives, regardless of earnings, maintained the responsibility for organizing the household and making sure things got done. This uneven division of labour may become a source of tension, which can lead to dissatisfaction with the relationship (Tichenor 1999) and perhaps a higher incidence of divorce (Heckert, Nowak and Snyder 1998).

In the same vein, another study found that when women were the chief wage earners (by at least \$10,000 more a year), complicated systems of shifting money into various spending pools were used to maintain the traditional role of the man as provider (Commuri and Gentry 2005). Also, full-time employed men in dual-earner couples who endorsed traditional gender roles were more likely to experience lower 'marital-role quality'<sup>3</sup> when their wives' market-based success threatened their need to be the primary provider (Brennan, Barnett and Gareis 2001). In contrast, among their full-time employed wives, a higher marital-role quality was associated with greater participation by their husbands in child care.

On the positive side, some men may welcome the sharing of the financial burden, and the family as a whole can become a stronger economic unit as a result. A working wife may also allow a man to be financially supported while he switches careers or starts his own business (Fix 1994), or if he becomes unemployed.

### Primary-earner wives: older and more educated

Primary-earner wives differ from other working wives in many ways. For one, they are slightly older. In 1994, the difference was only marginal: a median age of 39 versus 38.<sup>4</sup> In 2003, the median age was 43 versus 41, and the gap appears to be growing. Their husbands were also slightly older, with a median age of 45 in 2003, compared with 43 for primary-earner husbands (Table 1).

Primary-earner wives are also generally more educated than secondary-earner wives and primary-earner husbands. In 2003, 30% had a university degree, compared with 21% of secondary-earner wives and 25% of primary-earner husbands. Only 35% had a high school diploma or less, compared with 42% of secondary-earner wives and 40% of primary-earner husbands. Moreover, more than one-third of primary-earner wives had more education than their husbands (data not shown). This educational pattern is similar to that of a decade earlier, only less pronounced.

### Managerial and professional occupations more frequent

With their higher education levels, primary-earner wives have increased their presence in higher-paying occupations.<sup>5</sup> In 2003, these

**Table 1 Selected characteristics of dual-earner spouses**

	Primary earner				Secondary earner			
	Wife		Husband		Wife		Husband	
	1994	2003	1994	2003	1994	2003	1994	2003
<b>Median age</b>	39	43	41	43	38	41	42	45
<b>Education</b>	%							
Less than high school	13.7	10.1	18.7	14.0	15.8	11.5	24.6	17.8
High school graduate	22.8	24.8	25.5	26.4	31.5	30.4	25.2	27.6
Postsecondary certificate or diploma	38.5	35.0	33.3	34.6	35.8	36.9	30.3	31.9
University degree	24.9	30.0	22.4	25.0	17.0	21.2	19.8	22.7
<b>Work pattern</b>								
Full-time	84.6	88.2	98.1	97.9	66.4	71.9	92.5	90.8
Part-time	15.4	11.8	1.9	2.1	33.6	28.1	7.5	9.2
<b>Average paid weekly hours</b>	31.2	29.5	38.4	35.2	23.9	23.4	29.4	26.7
<b>Average work experience</b>	Years							
	9.9	11.9	15.4	14.7	8.4	9.5	14.4	15.3

Source: Statistics Canada, Survey of Labour and Income Dynamics



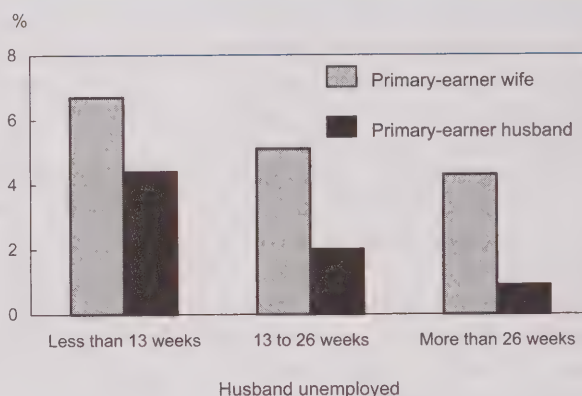
women were more likely than secondary-earner wives to be employed in managerial and professional occupations (40% versus 26%). Nevertheless, even though these positions were typically high-paying, primary-earner wives still could not match the earning power of primary-earner husbands in the same occupational group. Primary-earner wives in managerial and professional occupations earned on average \$68,000 annually while their male counterparts earned \$83,000. In general, primary-earner wives earned less than primary-earner husbands in each of the occupational groups examined.

Primary-earner husbands had a somewhat different occupational pattern, with 40% working in occupations related to construction, manufacturing and processing. Primary-earner husbands in this group had average earnings of \$48,000. Another 37% were employed in managerial and professional occupations (with average earnings of \$83,000). Secondary-earner husbands were found mostly in these same occupational categories, but their average earnings were less than half those of primary-earner husbands (Table 2).

### Secondary-earner husbands more likely to have been unemployed

Earnings disparities can arise not only from differences in age, education and occupation, but also from differences in labour force attachment and work patterns. Indeed, 16% of secondary-earner husbands were unemployed at some point in 2003, compared with only 7% of primary-earner husbands (Chart B). Moreover, the length of the husband's unemployment spell was more likely to be longer when the wife was

**Chart B** In one in six dual-earner couples with a primary-earner wife, the husband was unemployed at some point in 2003



Source: Statistics Canada, Survey of Labour and Income Dynamics, 2003

the primary earner. More than one-quarter of secondary-earner husbands who had been unemployed spent more than six months looking for work. On the other hand, only 12% of primary-earner husbands were unemployed for that length of time. The same held true in 1994 when 22% of secondary-earner husbands were unemployed at some point during the year, compared with only 10% of primary-earner husbands. In some cases then, the wife's primary breadwinner role may not have been intended, but rather may have occurred by default.

**Table 2** Dual-earner spouses by occupation and average earnings

	Primary earner				Secondary earner			
	Wife		Husband		Wife		Husband	
	%	Earnings (\$)	%	Earnings (\$)	%	Earnings (\$)	%	Earnings (\$)
<b>All occupations</b>	<b>100</b>	<b>41,200</b>	<b>100</b>	<b>57,800</b>	<b>100</b>	<b>22,000</b>	<b>100</b>	<b>21,300</b>
Managerial and professional	40	68,200	37	83,200	26	36,300	29	31,300
Financial, clerical, technical, culture and sport	33	38,500	9	50,100	37	26,700	12	28,600
Sales and service	19	32,900	14	51,600	28	16,700	18	23,800
Construction, manufacturing and processing	8	30,200	40	47,900	9	18,900	41	22,100

Source: Statistics Canada, Survey of Labour and Income Dynamics, 2003



## Long-term primary-earner wives

With longitudinal data, the duration of earnings patterns can be examined. Of couples with a primary-earner wife in 1999, almost half were still in that situation almost five years later.<sup>6</sup>

In 1999, long-term primary-earner wives had a median age of 42, as did working wives in general. However, primary-earner wives were more likely to have postsecondary education.

In line with their higher education, long-term primary-earner wives were also more likely to be in a managerial or professional occupation than wives in general. Indeed, more than 60% held such a position.

Higher rates of full-time work (90%) and longer workweeks (34 hours) were also characteristic of these primary-earner wives.

Five in six long-term primary-earner wives did not have preschool-aged children at home, so they may have been able to dedicate more energy to their careers, thus allowing them to maintain their primary breadwinner status for a longer period of time.

Long-term primary-earner wives had higher average earnings than other primary-earner wives and secondary-earner wives in 1999. The gap between their earnings and those of their husbands was on average larger as well. Indeed, almost two-thirds had more than twice the earnings of their husbands.

In short, compared with other wives, long-term primary-earner wives were older, more educated, and more likely to hold managerial or professional jobs. They were more likely to be full-time workers and work more paid hours, and less likely than secondary-earner wives to have

preschool children at home. They also had higher average earnings and the largest gap between their earnings and their husband's. Taken together, all these characteristics appear to have provided these women with the conditions not only to attain a primary-earner status, but also to maintain it for a longer period.

		Primary-earner wives	
1999	Secondary-earner wives	All	Long-term <sup>1</sup>
		Years	
<b>Median age</b>	40	42	42
		%	
<b>Education</b>	100.0	100.0	100.0
High school or less	45.3	41.0	37.1 <sup>E</sup>
Postsecondary education <sup>2</sup>	54.7	59.0	62.9
<b>Presence of preschool children</b>	25.5	15.6	16.2 <sup>E</sup>
<b>Work pattern</b>			
Full-time	70.1	85.6	90.2
Average paid weekly hours	24.7	29.7	34.2
		\$	
Average earnings	20,000	35,000	39,500

1 Five or more years.

2 Degree, certificate or diploma.

Source: Statistics Canada, Survey of Labour and Income Dynamics, 1999 to 2003

## Full-time schedule associated with primary-earner wives

Another area with marked differences was work patterns. Almost 90% of primary-earner wives worked full time in 2003, compared with less than 75% of those who were secondary earners. The full-time rate for primary-earner husbands was the highest at 98%, while secondary earners had a full-time rate similar to primary-earner wives. Viewed another way, secondary-earner wives were by far the most likely to work part time, with almost 30% doing so in 2003 compared with only 12% of primary-earner wives. For both primary- and secondary-earner husbands, the rates have changed little since 1994. For wives in general, however, full-time rates have increased, thereby reducing differences in work patterns between primary- and secondary-earner wives (Table 1).

Similarly, primary-earner wives also worked more hours per week and had more years of experience than their secondary-earner counterparts.<sup>7</sup> Specifically, primary-earner wives worked on average 7 hours more a week (30 hours versus 23). As well, primary-earner wives had about 12 years of work experience in 2003, while secondary-earner wives had only 10 years. This is akin to the pattern a decade earlier when primary-earner wives worked 31 hours per week and had 10 years of experience, while secondary-earner wives worked 24 hours and had 8 years experience. Primary-earner husbands had the most paid weekly hours and years of experience in both 2003 (35 hours, 15 years) and 1994 (38 hours, 15 years).

The trends in work patterns associated with primary-earner wives (full-time work, more paid weekly hours, more years of work experience) may also be linked to added stress and the difficulty of maintaining a healthy

balance between paid work and family demands. People with the most demands on their time are under the most stress (Frederick 1995). Moreover, women dissatisfied with their work-life balance spent more time on the job than women who were satisfied (Frederick and Fast 2001). Also, professional and managerial women were less satisfied with their work-life balance and had higher odds of being time-crunched than other workers. Similarly, about two-thirds of full-time employed parents were dissatisfied with their work-life balance (Silver 2000). Both fathers and mothers attributed this dissatisfaction to not having enough time for their family and spending too much time on the job. Moreover, these dual-earner parents were often doing some form of household work (such as shopping, cleaning, or household maintenance) when they were with their children.

#### Data source and definitions

The **Survey of Labour and Income Dynamics (SLID)** is a longitudinal household survey that began in January 1993. Every three years some 15,000 households are added and surveyed annually for six years. The longitudinal portion of this study focused on people who entered the survey in 1999 (Panel 3) and responded consecutively for the next four years. This was the most recent panel for which three or more years of data were available.

**Earnings** refers to all wages and salaries or net income from self-employment. Net self-employment earnings can be negative. Employment Insurance benefits (including parental benefits), CPP disability benefits, and workers' compensation are not included, but employer-paid maternity leave and parental leave benefits are.

An **earner** receives a wage or salary as an employee or net income from self-employment during the reference year.

A **husband-wife family** includes all married and common-law couples with or without children or other relatives in the same household. It does not include same-sex couples.

**Dual earners** are husband-wife families in which both spouses reported employment income in the reference year.

**Primary-earner wives** earned at least one dollar more than their husband in the reference year.

**Primary-earner husbands** earned at least one dollar more than their wife in the reference year. They also include husbands who had earnings equal to their wife's (2% of all dual-earner couples).

**Family income** is the sum of incomes received by all family members: employment earnings, investment income, pensions, and government transfers.

#### Presence of children

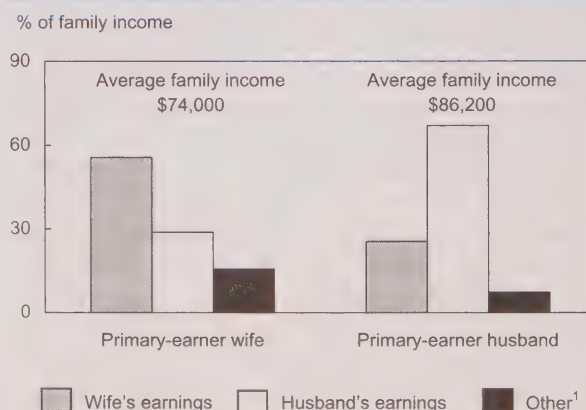
The timing of family formation can affect the earnings of women (Drolet 2002).<sup>8</sup> A significant portion of opportunities for promotion and earnings growth occur early in one's career, a period that may often coincide with decisions related to marriage and family formation. Women who miss this stage because of child-raising will recover in terms of earnings only as their children grow older, or perhaps not at all.

Primary-earner wives were less likely than secondary-earner wives to have preschool-aged children at home. Indeed, only 15% of primary-earner wives had one or more preschoolers at home, compared with almost one-quarter of secondary-earner wives. This is consistent with primary-earner wives being older and having more work experience.

#### Income lower in families headed by primary-earner wives

In 2003, primary-earner wives earned about \$41,000, almost 30% less than primary-earner husbands (Table 2).<sup>9</sup> This pattern was consistent across all occupational groups. Average family incomes also lagged behind—\$74,000 compared with \$86,000 for families in which the husband was the primary earner (Chart C). The tax system narrowed some of this gap, resulting in after-tax incomes of \$61,000 and \$69,000 respectively.

**Chart C Primary-earner wives contributed less than primary-earner husbands to total family income**



1 Non-employment income and other family members' earnings  
Source: Statistics Canada, Survey of Labour and Income Dynamics, 2003



Primary-earner wives also contributed less to family income than primary-earner husbands. Employment earnings of primary-earner wives represented just over half of their family's income, while the earnings of primary-earner husbands corresponded to two-thirds. As well, the contribution of other family members' earnings and non-employment income played a greater role when the wife was the primary earner, accounting for 16% of family income, compared with only 7% in families with the husband as the primary earner.

### Most primary-earner wives have more than twice the earnings of their husbands

The amount by which a primary-earner wife outearns her husband can range from a little to a lot. If the couple's earnings are very close, the primary-earner status can shift more easily from one to the other than if the earnings are farther apart. In 2003, in nearly two-thirds of couples with a primary-earner wife, the wife earned more than twice as much as her husband.<sup>10</sup> Only about one-quarter of primary-earner wives earned less than 50% more than their husband (data not shown). However, the ratio of wives' earnings to husbands' earnings has remained relatively static (Table 3).

**Table 3 Ratio of earnings in dual-earner couples**

	1994	1997	2000	2003
<b>Primary-earner husband</b>				
% of dual-earner couples	72.3	73.3	73.2	71.4
Ratio of husband's to wife's earnings	2.6	2.6	2.6	2.6
<b>Primary-earner wife</b>				
% of dual-earner couples	27.7	26.7	26.8	28.6
Ratio of wife's to husband's earnings	1.9	1.9	1.9	1.9

Source: Statistics Canada, Survey of Labour and Income Dynamics

### Summary

Over the last four decades, the dramatic increase in dual-earner couples has been accompanied by an increase in wives as primary breadwinners. In nearly 1.4 million (29%) of the 4.7 million dual-earner couples in 2003, the wife was the primary breadwinner. These women tend to be older and more educated

than their secondary-earner counterparts. Many are more educated than their spouses. In line with their age and education, primary-earner wives are more frequently found in managerial and professional occupations. They are also more likely to have a full-time job, work more paid hours per week, and have more years of experience. All these characteristics are associated with higher earnings.

While most primary-earner wives had more than twice the earnings of their husbands in 2003, they did not match the earning power of primary-earner husbands. Moreover, the ratio of their earnings to their husbands' has on average remained relatively static since 1994. Their average family income also lagged behind that of families in which the husband was the primary breadwinner. Also, on average, primary-earner wives contributed less than primary-earner husbands to their family's total income.

Whether through intent or circumstance, primary breadwinner wives are likely to remain a significant part of Canada's labour force, a phenomenon that is likely to bring lasting changes to traditional gender roles, spending patterns, and household decision making.

### Perspectives

#### ■ Notes

1 The United States experienced a similar rise. According to the Current Population Survey, the proportion of dual-earner couples in which the wife earned more than the husband increased from 16% in 1981 to 23% in 1996 (Winkler 1998). The study was restricted to couples in which both spouses were aged 25 to 64; the self-employed were excluded.

2 It has been argued that the stable percentage of primary-earner wives, even during a strong economy, can be linked to structural changes in the labour market. For example, the presence of adult women aged 25 to 54 in the labour force has increased over time. Moreover, during the 1990s, the rapid growth of the information and communication technology sector drove the demand for more highly educated white-collar workers, while the slump in resources (mining and agriculture) and construction depressed growth for the less educated blue-collar workers. Government downsizing was also a factor during this period. However, labour market patterns since 2000 have proven to be the reverse of the 1990s, shifting from high-tech to housing construction (and real estate) and resources (mining), as well as reinvestment in public services, notably hospitals (Cross 2005).



3 Marital-role quality was determined using a list of 26 marital reward and 26 marital concern items. Subjects used a four-point scale (from 'not at all' to 'extremely') to indicate to what extent each of the items were currently rewarding or of concern. The reward items were weighted by 1 and the concern items by -1, and the weighted mean constituted the scale score. See Barnett et al. 1993 for more information and the complete list of role-quality measures.

4 The year 1994 was chosen for comparison since the previous study (Crompton and Geran 1995) looked at 1993.

5 Occupations were grouped. Managerial and professional: management occupations (group A in the Standard Occupational Classification); professional occupations in business and finance (B0); natural and applied sciences and related occupations (C); professional occupations in health, nurse supervisors and registered nurses (D0-D1); and occupations in social science, education, government service and religion (E). Financial, clerical and technical: financial, secretarial and administrative occupations (B1-B3); clerical occupations including supervisors (B4-B5); technical, assisting and related occupations in health (D2-D3); and occupations in art, culture, recreation and sport (F). Sales and service occupations (G). Construction, manufacturing and processing: trades, transport and equipment operators (H); occupations unique to primary industry (I); and occupations unique to processing, manufacturing and utilities (J).

6 To examine the earnings patterns of these couples over time, only couples who remained together for the entire five-year period were selected. In this way, the financial implications of marital dissolution would not be an issue. Moreover, couples had to maintain their dual-earner status for all five years. One million dual-earner couples in 1999 remained dual earners over the study period. In some 300,000 of them, the wife was the primary breadwinner.

7 This refers to years of work experience in full-year, full-time equivalents. Each year worked part time is counted as half a full-time year.

8 Drolet found that in 1998, the average hourly earnings of women who delayed having children were 17% higher than the earnings of those who had children early. Moreover, these women had an average of 1.7 more years of full-time, full-year work experience. Delaying children refers to postponing the birth of the first child at least one full year after the 'predicted' age for having children. Similarly, having children early refers to having children at least one full year before the predicted age for the birth of a first child. Predicted age is the average age for giving birth for the first time, taking into account education level, major field of study, urban size, and birth year of the mother.

9 Interestingly, secondary earners earned almost the same amounts: \$22,000 for wives, and \$21,000 for husbands. This implies that the difference in the average family income of the two family types was principally due to the earnings of the main breadwinner. The same was also true in 1994.

10 This high proportion is in part related to the inclusion of negative earners (the self-employed), and unemployed or retired persons who worked at some point during the year.

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## Perspectives on Labour and Income

*The quarterly for labour market and income information*

# Education and earnings

Lucy Chung

Between 1980 and 2000, and particularly the latter half of the 1990s, the earnings gap widened between young workers who were less-educated and those who were well-educated. Several explanations have been suggested. Some research attributes the gap to skill-biased technological change, whereby workplaces supplanted manual labour with newer technology and processes requiring more skilled and better educated workers. The subsequent demand resulted in higher wages for such workers and hence increased returns to education. Other explanations include the growth of international trade (Wood 1994) and institutional changes such as the de-unionization of workplaces (Dinardo and Lemieux 1997).

In a global economy, industries that do not require a highly skilled, highly educated workforce search the world for cheap labour, often finding it in developing countries such as China, India or Mexico. This leaves Canadian workers with no postsecondary education facing significant uncertainty. Moreover, as the economy becomes more dependent on those with high levels of education, it is expected that the education wage premium will increase and the earnings gap between university and high school graduates will widen.

Recently, however, hot commodity and housing markets, as well as increased consumer spending since 2000, have led to a change in the industries and occupations with the most job growth. The frontrunners have been mining and oil and gas extraction, construction, and real estate, with increases of 17%, 18% and 10% respectively between 2000 and 2004 (Cross 2005). The retail sector also saw strong employment growth.

Although both blue-collar and white-collar jobs have become more plentiful since 2000, the most substantial growth occurred in positions not requiring post-

secondary education, such as retail sales and clerical for white-collar, and construction and mining for blue-collar. Such jobs generally employ a larger proportion of young, less-educated workers.

The favourable conditions in these industries and occupations in recent years raise the question as to what extent the wages of young, less-educated workers have recovered, if at all, since 2000 as a result of strong employment growth in lower-skilled jobs. This study aims to answer this question by comparing employment rates, the education gap, and the changing demand for less-educated and well-educated workers between 1980 and 2005 (see *Data sources and definitions*). Young workers refers to those aged 25 to 34 while older workers are 35 to 54.

## Education levels still rising

In 1980, individuals without a high school diploma represented roughly one-third of young workers, and half of older workers (Table 1). However, from 1980 to 2000, the proportion of young workers without a

**Table 1 Distribution of employees by educational attainment and age group**

	Census		LFS	
	1980	2000	2000	2005
	%			
<b>25 to 34</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
Some high school or less	29	16	12	9
High school diploma	17	13	20	18
Some postsecondary	40	48	44	46
University degree	14	24	24	27
<b>35 to 54</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
Some high school or less	47	22	18	13
High school diploma	11	16	22	22
Some postsecondary	33	44	41	43
University degree	10	19	19	22

Sources: Statistics Canada, Census of Population; Labour Force Survey, January and July

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## Data sources and definitions

This study uses census data from 1980, 1985, 1990, 1995 and 2000. The **Census**, which is taken every five years, is the only available source that provides consistent information on education level over the 20-year period in question. Since census data for 2005 are not yet available, the **Labour Force Survey (LFS)** was used to analyze changes in the labour market between 2000 and 2005. January and July data for each year were used.

The population is restricted to individuals aged 25 to 54 living in private households, and excludes full-time students, those living in the territories, unpaid family workers, and those working in the Armed Forces. Workers 55 and over were excluded since their performance in the labour market

may be affected by early retirement decisions. As well, other studies (Morissette and Johnson 2004; Morissette, Ostrovsky, and Picot 2004) have used this age cutoff, thus facilitating comparison with this study. The sample size for 2000 using the LFS was 110,668, representing 13.4 million Canadians. For 2005 the sample size was 53,114, representing 13.8 million.

**Educational attainment** is divided into four categories: some high school or less, high school diploma, some postsecondary, and university degree. **Real weekly earnings** are defined as annual earnings in 2004 dollars divided by the number of weeks actually worked.

diploma fell 13 percentage points, compared with 25 points for the older group. Meanwhile, the proportion with a university degree increased about 10 points for both groups. During the first five years of this decade the trend continued, with both age groups experiencing a 3-to-5-point reduction in their share of workers without a high school diploma and a 3-point rise in their share of university graduates. Clearly then, the educational landscape has changed over the last 25 years so that now a quarter of 25 to 34 year-olds and a fifth of 35 to 54 year-olds are university graduates, while the proportion without a high school diploma has dropped below 15%. If demand for less- and well-educated workers were constant, one would expect these changes in supply to have a positive effect on the employment and earnings of less-educated workers while negatively affecting those of the well-educated.

### Falling employment rates for men throughout the 1980s and 1990s

The moderate increase in the overall employment rate for workers from 1980 to 2000 masks underlying differences by sex, age and edu-

**Table 2 Employment rates by sex, age, and educational attainment**

	Census			LFS		
	1980	1990	2000	2000	2003	2005
				%		
<b>All employees</b>	<b>73.8</b>	<b>77.5</b>	<b>79.7</b>	<b>79.7</b>	<b>80.4</b>	<b>81.0</b>
<b>Men</b>	<b>87.7</b>	<b>84.5</b>	<b>84.6</b>	<b>85.5</b>	<b>84.8</b>	<b>85.1</b>
<b>25 to 34</b>	90.8	85.3	86.9	88.8	87.7	88.3
Some high school or less	84.1	74.9	74.6	75.0	76.6	76.5
High school diploma	92.0	85.9	85.3	89.0	85.8	88.7
Some postsecondary	92.9	88.5	89.6	91.0	89.8	90.0
University degree	96.2	93.4	92.5	92.7	90.8	90.2
<b>35 to 54</b>	90.6	86.8	86.0	88.7	87.8	88.4
Some high school or less	85.7	77.9	75.3	80.1	77.3	79.1
High school diploma	92.1	88.1	86.9	89.2	87.7	88.5
Some postsecondary	93.9	89.5	88.6	90.4	90.2	89.9
University degree	97.1	94.6	92.2	92.7	91.1	91.7
<b>Women</b>	<b>60.2</b>	<b>70.7</b>	<b>75.0</b>	<b>73.9</b>	<b>75.9</b>	<b>76.8</b>
<b>25 to 34</b>	60.8	71.1	75.8	75.7	77.3	78.2
Some high school or less	46.1	52.4	52.0	46.8	48.8	49.0
High school diploma	57.8	68.6	67.4	70.9	69.3	72.0
Some postsecondary	68.1	76.7	79.2	79.0	81.6	81.0
University degree	79.9	85.5	86.0	84.9	83.1	84.8
<b>35 to 54</b>	56.8	70.9	75.7	75.0	77.1	77.9
Some high school or less	47.5	55.7	58.9	56.8	59.4	57.6
High school diploma	58.5	71.8	74.4	74.0	75.5	75.9
Some postsecondary	67.3	78.0	80.3	79.2	81.2	81.5
University degree	76.6	85.2	85.0	83.8	82.1	83.8

Sources: Statistics Canada, Census of Population; Labour Force Survey, January and July

cation. For example, while the increased participation of women in the labour market produced an enormous growth in their employment rate (15 percentage points), the employment rate for men fell by 3 points (Table 2).<sup>1</sup> Most of the drop for men occurred between 1980 and 1990, coinciding with the deepest and longest recession in the economy since the

Second World War. The decrease was seen for men in all age and education groups, but especially those without a high school diploma.<sup>2</sup>

Employment rates for those with a high school diploma or less were consistently lower than those of university graduates throughout the 1980-to-2000 period. The gap increased during these years, with employment rates declining more for less-educated men than for well-educated men in each age category. During the past five years, however, the trend has reversed. Rather than continuing to decline, employment rates among workers with less education remained relatively stable, while their university-educated counterparts witnessed only slight decreases in each age category.

Among young men, high school graduates found that their chances of being employed remained virtually unchanged, while university graduates saw their employment rate drop by 2.5 percentage points. During the 2000-to-2005 period, employment rates generally did not improve for men but continued to increase for women. The expectation that more blue-collar jobs would spur a rise in the proportion of less-educated men employed did not materialize. Only young men who had not completed high school saw their employment rate rise (from 75.0% in 2000 to 76.5% in 2005).

Employment rates of young, less-educated women rose slightly during the 2000-to-2005 period, with a 2.2 percentage point increase registered for those who did not finish high school. This could reflect the growth in retail sales and clerical jobs (Cross 2005). Employment rates for women university graduates remained fairly constant.

Possibly, the employment rates of less-educated men would have continued to decline had it not been for the rise in blue-collar jobs in mining, oil and gas extraction, construction, and real estate—

especially as the share of jobs in manufacturing continued its long-term trend of decline, from 19% in 1980 to 13% as of December 2005.<sup>3</sup>

### Decomposition of employment

For analytic purposes, employment is often split into full-time paid, part-time paid, and self-employment. For the 1980-to-2000 period, full-time employment rates declined for men, regardless of their age or educational attainment. Between 2000 and 2005, decline in the full-time rate for men continued, but young workers with a university degree were responsible for most of it (Table 3). The overall employment rate for the well-educated group dropped 2.5 percentage points, as did their full-time employment rate (from 78.2% to 75.7%). And although the overall employment rate for young men with a high school diploma did not increase, examining the differences by employ-

**Table 3 Full-time paid employment rates by sex, age, and educational attainment**

	Census			LFS		
	1980	1990	2000	2000	2003	2005
	%					
<b>All employees</b>	<b>56.5</b>	<b>59.1</b>	<b>59.3</b>	<b>58.8</b>	<b>59.9</b>	<b>60.4</b>
<b>Men</b>	<b>71.4</b>	<b>68.5</b>	<b>66.8</b>	<b>66.2</b>	<b>66.2</b>	<b>66.3</b>
<b>25 to 34</b>	76.9	72.5	73.2	73.9	73.4	74.5
Some high school or less	68.5	61.6	60.5	59.7	61.2	62.9
High school diploma	78.5	72.6	70.4	72.1	71.9	74.6
Some postsecondary	80.1	76.2	76.1	76.8	75.4	76.5
University degree	82.1	80.2	79.4	78.2	76.7	75.7
<b>35 to 54</b>	72.0	69.3	67.6	67.0	67.3	67.1
Some high school or less	65.8	60.3	57.3	58.2	58.5	57.6
High school diploma	75.3	72.0	69.2	69.2	68.7	67.5
Some postsecondary	76.0	72.6	70.8	69.5	69.8	69.5
University degree	79.3	74.5	71.3	67.5	67.4	68.2
<b>Women</b>	<b>41.7</b>	<b>49.9</b>	<b>52.0</b>	<b>51.3</b>	<b>53.5</b>	<b>54.5</b>
<b>25 to 34</b>	43.9	52.4	56.0	56.4	59.5	59.9
Some high school or less	31.1	35.3	33.7	32.1	31.9	33.4
High school diploma	42.3	49.6	46.1	51.7	51.0	53.1
Some postsecondary	48.7	56.9	57.6	57.4	62.1	60.8
University degree	63.2	68.3	69.5	67.8	67.9	68.9
<b>35 to 54</b>	35.9	48.6	52.5	51.4	53.7	55.0
Some high school or less	29.4	37.1	39.5	37.0	40.3	40.2
High school diploma	37.5	50.2	51.8	52.0	53.0	53.5
Some postsecondary	41.9	52.9	55.4	54.2	56.0	57.5
University degree	55.7	61.6	61.2	57.8	58.7	59.6

Sources: Statistics Canada, Census of Population; Labour Force Survey, January and July

**Table 4 Change in weekly earnings**

	Overall				Full-time			
	Median		Average		Median		Average	
	1980-2000	2000-2005	1980-2000	2000-2005	1980-2000	2000-2005	1980-2000	2000-2005
<b>All employees</b>	<b>-1.2</b>	<b>-1.0</b>	<b>4.1</b>	<b>1.7</b>	<b>-0.3</b>	<b>0.1</b>	<b>5.3</b>	<b>1.7</b>
	% change							
<b>Men</b>	<b>-6.5</b>	<b>-0.6</b>	<b>1.2</b>	<b>0.2</b>	<b>-5.8</b>	<b>-1.3</b>	<b>3.1</b>	<b>0.4</b>
<b>25 to 34</b>	-16.9	0.9	-10.6	2.5	-15.7	1.9	-9.5	2.7
Some high school or less	-22.9	4.4	-21.1	7.8	-21.7	3.8	-20.3	8.1
High school diploma	-24.9	1.1	-21.0	5.2	-23.6	3.0	-19.8	5.1
Some postsecondary	-19.0	1.4	-14.5	2.6	-17.6	1.5	-13.6	2.7
University degree	-9.3	-1.3	0.3	-2.8	-8.0	0.9	1.2	-2.3
<b>35 to 54</b>	-6.8	-1.8	-0.4	-0.6	-5.7	-2.3	0.8	-0.5
Some high school or less	-14.0	-0.8	-10.6	0.6	-12.8	-1.2	-9.6	0.3
High school diploma	-16.9	-5.3	-15.7	-1.8	-15.1	-5.8	-14.4	-1.6
Some postsecondary	-10.5	-2.8	-5.6	-1.3	-9.8	-2.1	-4.6	-1.2
University degree	-11.4	-2.7	0.0	-3.9	-10.1	-4.4	1.9	-3.8
<b>Women</b>	<b>12.6</b>	<b>4.1</b>	<b>18.1</b>	<b>4.8</b>	<b>14.2</b>	<b>2.0</b>	<b>19.1</b>	<b>4.5</b>
<b>25 to 34</b>	0.8	3.5	5.3	5.3	-0.4	2.2	4.3	4.5
Some high school or less	-17.0	-1.8	-7.6	-1.6	-15.3	-0.9	-8.0	1.0
High school diploma	-20.2	0.4	-10.2	2.0	-15.2	-0.9	-9.4	0.5
Some postsecondary	-10.0	5.1	-4.4	5.1	-9.7	2.2	-5.4	3.8
University degree	-6.8	-0.6	0.5	2.4	-6.7	1.7	-1.1	2.7
<b>35 to 54</b>	17.2	3.5	22.8	5.4	16.3	3.6	19.1	4.6
Some high school or less	-1.5	2.1	5.9	5.5	-0.8	1.8	4.3	4.0
High school diploma	3.2	0.4	8.2	3.3	3.9	0.6	4.2	3.8
Some postsecondary	5.7	1.6	10.5	3.5	2.6	1.2	6.8	2.2
University degree	-4.5	-2.8	4.9	-0.1	-5.4	-4.8	2.5	-0.2

Sources: Statistics Canada, Census of Population, 1980 to 2000; Labour Force Survey, January and July 2000 to 2005

ment type indicates that full-time paid employment for this group went up 2.5 percentage points, but was offset by a decrease in self-employment (data not shown).

Between 1980 and 2000, full-time employment rates for women rose by at least 10 percentage points. This increase was more pronounced for the older age group where the rate increased almost 17%. Although full-time employment rates increased at all education levels, the rise was more pronounced among young, well-educated women than among those with less education. The older group saw increases at all education levels. Between 2000 and 2005, the full-time employment rate for women continued to climb for both age groups and for every level of education.

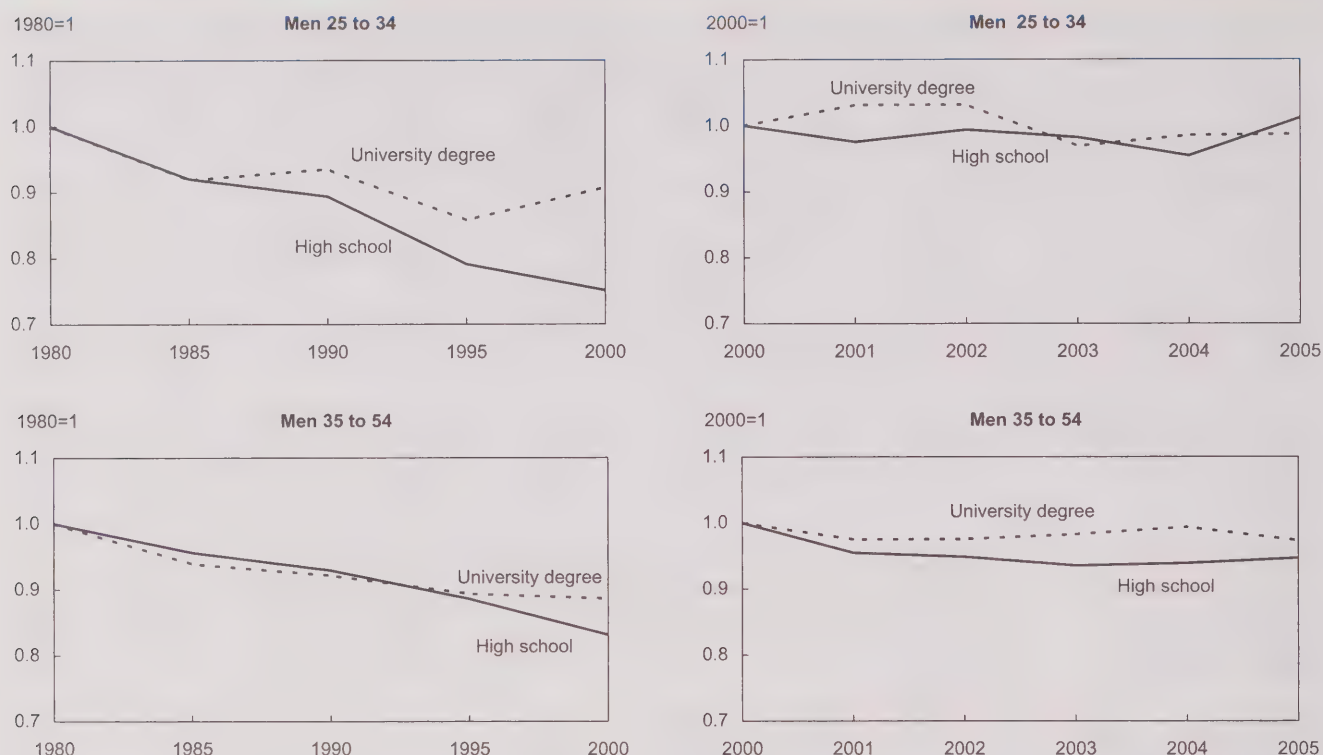
Given that full-time paid employment rates have risen slightly since 2000 for the young and less-educated, regardless of sex, it is interesting to see how the

increase and the concomitant shift to blue-collar and non-management white-collar jobs have affected their earnings.

### Education-earnings gap

On the whole, the constant-dollar median weekly earnings of paid workers have seen little change in the past 25 years (Table 4).<sup>4</sup> However, it is possible to find certain differences when examining earnings by age, sex and educational attainment. For example, between 1980 and 2000, men's median weekly earnings dropped by 7% while women's grew by 13%. In the last five years, median earnings have remained relatively constant for men while continuing to rise for women (4%). Average weekly earnings showed similar patterns.



**Chart A Median real weekly wages of men**

Sources: Statistics Canada, Census of Population, 1980 to 2000; Labour Force Survey, January and July 2000 to 2005

The increase in women's earnings between 1980 and 2000 was concentrated among older women, who saw their average real weekly earnings rise by 23%, compared with 5% for younger women. Older men also fared better than their younger counterparts over this period, their average weekly earnings remaining relatively constant while those of young men fell 11%.<sup>5</sup> Young male workers definitely bore the brunt of negative labour market changes in the 1980s and 1990s. Indeed, previous research has shown that between 1980 and 2000, real weekly earnings of young male high school graduates employed in the private sector fell 20% (Morissette, Ostrovsky and Picot, 2004).

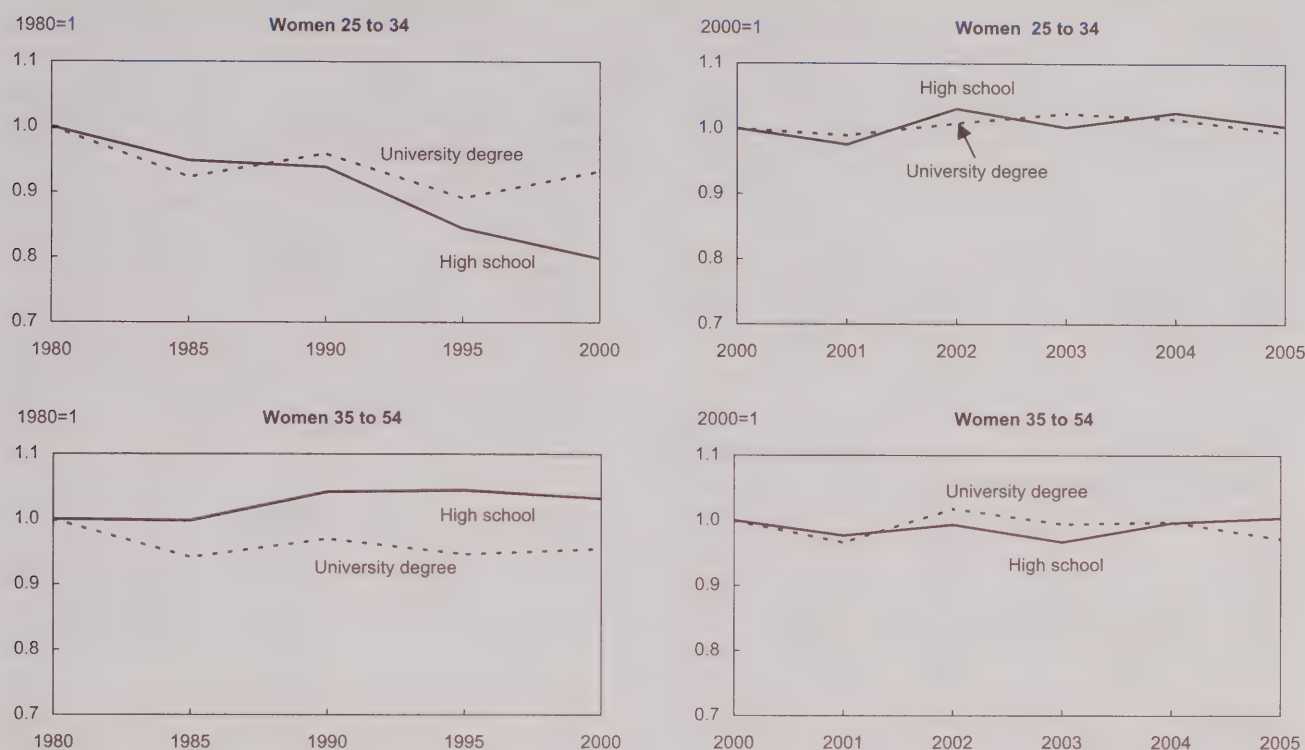
High school graduates in both age groups saw their earnings fall in relation to those with a university degree over this period (except for older women). For instance, average weekly earnings of young male high school graduates fell 21% between 1980 and 2000,

while their university-educated counterparts saw a slight increase of 0.3%. As a result, the wage gap between young workers with university and high school credentials rose over the period (Charts A and B).

Over the last five years, however, earnings trends have changed somewhat. In the case of younger men, the trend has reversed. Between 2000 and 2005, the average weekly earnings of young male employees with a high school diploma rose by 5% while dropping 3% for those with a university degree. Even though the earnings gap between university-educated workers and those with a high school diploma remains large, these recent movements have somewhat narrowed the gap.

### Earnings effects of bust and boom

In an increasingly knowledge-based economy such as Canada's, the recent drop in real earnings among men with a university degree has been unexpected.

**Chart B Median real weekly wages of women**

Sources: Statistics Canada, Census of Population, 1980 to 2000; Labour Force Survey, January and July 2000 to 2005

However, while many lost their jobs in the high-tech bust of 2001, others have found work in the flourishing oil and gas, mining and construction industries. In fact, the oil boom led to a 43% growth in employment in the oil and gas sector between 2000 and 2004 (Cross 2005). Construction was also booming over this period (26%), while overall employment growth from 2000 to 2005 was less than 10%.

In order to determine the extent to which the high-tech meltdown was a cause of the decline in earnings of men with a university degree over the past five years, the computer and telecommunications (CT) sector was excluded from the calculation of weekly earnings (Table 5).<sup>6</sup> With this sector excluded, the average weekly earnings of young men fell by less than 1%, compared with 2.8% when it was included. For older men, median and average weekly earnings either

remained relatively constant or dropped even more when the CT sector was excluded. Wage changes in the CT sector therefore did not explain the drop in weekly earnings for this group of workers.

Employment growth in mining and oil and gas extraction, construction, and real estate likely contributed to the increase in weekly earnings for employees with high school education.<sup>7</sup> Excluding these sectors should therefore lessen the increase, and indeed this is true for certain groups of workers. All sectors included, young men with a high school diploma saw their average weekly earnings increase by 5.2% from 2000 to 2005. With the high-growth sectors excluded, their real earnings increased only 3.2%. For young men without a high school diploma, including all sectors showed an average weekly earnings gain of 7.8%. When mining and oil and gas extraction, construction,

**Table 5 Change in weekly earnings, 2000 to 2005**

	Excluding computer and telecommunications sector				Excluding mining, oil and gas, construction, and real estate			
	Overall		Full-time		Overall		Full-time	
	Median	Average	Median	Average	Median	Average	Median	Average
	% change							
<b>All employees</b>	<b>0.3</b>	<b>2.0</b>	<b>1.5</b>	<b>1.9</b>	<b>-0.2</b>	<b>1.4</b>	<b>0.6</b>	<b>1.4</b>
<b>Men</b>	<b>-0.9</b>	<b>0.5</b>	<b>-1.6</b>	<b>0.7</b>	<b>-1.1</b>	<b>-0.2</b>	<b>-1.6</b>	<b>0.1</b>
<b>25 to 34</b>	1.6	3.5	1.3	3.7	0.1	1.5	0.7	1.7
Some high school or less	4.2	7.8	3.8	8.1	3.4	3.6	4.3	4.2
High school diploma	1.1	5.0	4.1	4.9	-0.2	3.2	0.4	3.0
Some postsecondary	0.1	3.1	0.7	3.2	0.3	2.2	1.4	2.4
University degree	0.4	-0.7	-1.0	-0.2	-1.9	-3.2	-0.1	-2.7
<b>35 to 54</b>	-3.5	-0.4	-2.3	-0.4	-3.5	-0.9	-2.7	-0.8
Some high school or less	-1.0	0.5	-1.2	0.2	-3.1	-0.3	-2.4	-0.4
High school diploma	-5.3	-1.7	-5.8	-1.6	-4.8	-2.3	-5.6	-2.1
Some postsecondary	-2.8	-1.3	-3.1	-1.1	-2.4	-1.6	-2.8	-1.4
University degree	-5.5	-3.7	-2.7	-3.5	-2.7	-4.0	-3.5	-4.0
<b>Women</b>	<b>4.4</b>	<b>5.0</b>	<b>3.5</b>	<b>4.6</b>	<b>3.8</b>	<b>4.7</b>	<b>2.0</b>	<b>4.5</b>
<b>25 to 34</b>	5.5	5.8	2.6	4.7	3.0	5.1	2.2	4.3
Some high school or less	-1.8	-1.9	-0.9	0.6	-0.5	-1.4	-0.9	0.9
High school diploma	0.4	2.6	-0.6	0.8	0.4	1.9	-0.9	0.2
Some postsecondary	6.3	5.4	3.0	4.1	4.6	4.6	2.2	3.4
University degree	0.3	2.9	2.9	2.8	-0.6	2.4	1.7	2.6
<b>35 to 54</b>	2.8	5.3	4.2	4.5	4.0	5.3	3.4	4.5
Some high school or less	1.0	5.4	1.6	3.8	1.1	5.2	1.3	3.6
High school diploma	0.1	3.4	1.8	4.0	0.4	3.2	1.2	3.6
Some postsecondary	1.8	3.6	1.9	2.3	2.0	3.5	1.0	2.4
University degree	-3.9	-0.5	-5.1	-0.7	-2.3	-0.2	-5.1	-0.3

Source: Statistics Canada, Labour Force Survey, January and July

and real estate were excluded, the rise was only 3.6%. For women, the high employment growth sectors had little effect on the earnings of those with a high school diploma or less.

It appears then that the CT sector explains a portion of the decrease in the average weekly earnings of young university-educated male workers but not those of their older counterparts. In addition, the sectors with high employment growth during the last five years contributed to the increase in earnings among young male employees with a high school diploma or less, but

had little effect on their older counterparts or women with the same education.

### Summary

Over the last 25 years, technological advancement has increased the need for highly educated workers. In 2005, 72% of Canadians aged 25 to 34 had some type of postsecondary education, compared with 54% in 1980.

Employment rates also changed over the period. Women, regardless of education level, saw their employment rates increase as more

of them moved into the labour market. For men, however, rates decreased. Between 1980 and 2000, the decline was more pronounced for men with lower levels of education.

As a result of strong commodity and real estate markets, the past five years have seen a change from white-collar to blue-collar jobs, where young people with less education are mainly employed. Although this change does not appear to have boosted the employment rate of young, less-educated men, it may have mitigated any further downward



pressure on their employment rates. However, when employment rates are examined separately for full-time, part-time and self-employment, full-time employment of less-educated workers did rise over the last five years but was offset by a drop in self-employment.

Coinciding with the recent movement toward blue-collar jobs, average real earnings have increased more for young, less-educated men than for any other group. (Men with a university degree actually saw theirs decline.) Nevertheless, the real earnings of these men are still below their 1980 levels, and the gap between them and their university-educated counterparts is still large. Moreover, earnings growth among less-educated workers is not expected to be sustainable since the recent increases appear to be a result of short-term fluctuations in demand, mainly due to the boom in oil and gas, mining and construction.

### Perspectives

#### ■ Notes

- 1 Estimates for workers aged 15 to 24 are not presented because of small sample sizes.
- 2 The decline in employment rates does not reflect an absolute decline in employment but rather a decline relative to the growth in population.
- 3 The recent drop in male workers with a university degree could be attributed to the high-tech bust in 2001. The next year, employment in the computer and telecommunications sector fell by 10% and the unemployment rate jumped from 3.9% to 6.6%.
- 4 Overall median weekly earnings in 2005 were \$640; average weekly earnings were \$715.
- 5 The patterns are much the same for full-time employees (Table 3).
- 6 The CT sector includes the following NAICS (North American Industry Classification System) industries: commercial and service industry machinery manufacturing (3333),

computer and peripheral equipment manufacturing (3341), communications equipment manufacturing (3342), audio and video equipment manufacturing (3343), semiconductor and other electronic components manufacturing (3344), navigational, measuring, medical and control instruments manufacturing (3345), computer and communications equipment and supplies wholesaler-distributors (4173), software publishers (5112), telecommunications (5133), data processing services (5142), computer systems design and related services (5415), electronic and precision equipment repair and maintenance (8112).

7 These high-growth sectors include the following NAICS industries: oil and gas extraction (2111), support activities for mining, and oil and gas extraction (2131), construction (23), real estate and rental and leasing (53).

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# Is the workplace becoming safer?

*F. Curtis Breslin, Peter Smith, Mieke Koeboorn and Hyunmi Lee*

**J**obs in Canada are increasingly characterized by brain power rather than brawn. Despite the recent resurgence in some 'blue-collar' sectors (notably construction, oil and gas), the long-term shift has been away from resource and manufacturing industries to service-producing industries. Moreover, with an increasingly educated workforce, the structure and activities of many jobs are changing within sectors. Over the course of the 1990s, for example, the proportion of employees using computers on the job doubled from 30% to 60% (Marshall 2001). Have such changes resulted in fewer injuries on the job?

For more than a decade, compensation claims for lost work days have generally declined in North America and Europe. Over a six-year period in the 1990s, lost-time claim rates declined in Ontario by 28.8% (Mustard et al. 2003). Similar declines were seen elsewhere for claims related to specific conditions such as low-back pain and upper-extremity disorders (Silverstein et al. 1998; Murphy and Volinn 1999). Even though the declines are encouraging, the rate of decrease may not be uniform for all workers (Silverstein et al. 1998; Ostry 2000; Smith and Mustard 2004). For example, over a nine-year period, the proportion of women submitting claims for certain hand/wrist and elbow disorders more than doubled (Silverstein et al. 1998).

Workplace injuries among young workers aged 15 to 24 are of particular interest. Numerous U.S. and Canadian studies have shown youths to be at higher risk for work injuries than older workers. However, whether youths show a different relative risk for work injury between jurisdictions and how that risk changes over time has yet to be systematically examined. Initiatives such as media campaigns have been implemented in Canada and the U.S. to increase young workers' awareness of work safety (WorkSmartOntario 2006;

LOHP 1998). Differences in the scope and effectiveness of these initiatives may also lead to varying rates of decline for workers of different ages.

Although Canada may continue to become less reliant on jobs in the goods-producing sector, which has traditionally had higher injury rates, regional differences in economic structure and industry mean that dissimilar injury claim rates are likely to persist.

Using the Labour Force Survey to estimate the working population as well as work injury data from Ontario's Workplace Safety and Insurance Board and British Columbia's WorkSafeBC, this article examines injury claim rates to determine whether the two provinces show comparable claim trends over time; whether the injury risk differs by industry, sex or age; and whether injury rates changed between 1990 and 2001 (see *Data sources and definitions*).

## Work injury claim rates generally declining

Overall, between 1990 and 2001, work injury rates declined in both British Columbia and Ontario (Chart). These findings are generally consistent with previous North American and European studies. In Ontario, the decline was 4.6% per year (from 5.2 to 2.5 per 100 full-time equivalents) and in British Columbia, 3.0% per year (from 6.1 to 4.1). The absolute decline was somewhat larger in the early 1990s than in the latter half of the decade, especially in Ontario. Possible reasons for the slowing in the rate of decline could be related to changes in occupational health and safety enforcement, a slowing of 'de-industrialization' (the movement away from the primary and manufacturing sectors to more service-oriented jobs), as well as changes in the process for determining insurance premiums (for example, experience rating programs) and improvements in technology and equipment. These, coupled with the reductions not being predominantly due to changes in claim reporting practices (Mustard et al. 2003), support the notion that an important reduction in injury risk has occurred in the two provinces.

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## Data sources and definitions

### Ontario claims

Ontario's Workplace Safety and Insurance Board (WSIB) is the single payer workers' compensation insurance authority in Ontario and covers approximately 65% to 70% of labour force participants (AWCBC 2005). The remaining 30% to 35% include the self-employed, domestic workers, federal government workers,<sup>1</sup> the majority of the finance industry, and workers associated with interprovincial commerce. The WSIB requires lost-time claims to be submitted for any injury occurring during paid employment that results in an absence from regular work following the day of the accident, loss of wages/earnings, or a permanent disability/impairment.

Between 1990 and 2001, 1.5 million short-term and long-term disability claims were submitted to the WSIB. Records with no age, sex or industry were removed. Almost 33,000 claims (2%) were missing information on industry, and 270,000 (18%) were from industries with partial or complete voluntary coverage. These claims were removed since the workforce insured in these industries cannot be estimated. In addition, 11,000 claims (1%) had missing information on age or sex. This left a total of 1.2 million lost-time claims.

Each lost-time claim included injury date, sex, age at time of injury, and industry. The industry was coded to the Standard Industrial Classification 1980 (Statistics Canada 1986). Workplaces were grouped into two categories: goods and services. Goods-producing industries comprised agriculture, fishing, forestry, mining and oil, manufacturing, and construction. Service industries comprised transportation; communication; trade; finance and insurance; real estate; business services; government services; education; health and social services; and accommodation, food and beverages.

### British Columbia claims

WorkSafeBC insures approximately 90% of workers in British Columbia. The remaining 10% include certain government employees (AWCBC 2005). WorkSafeBC defines a lost-time claim as an injury that "disables a worker from earning full wages at the work at which the worker was employed." (Section 5(2) of the British Columbia Workers' Compensation Act). It goes on to say that compensation is payable from the first working day following the day of the injury, while a health-care benefit only is payable for day of the injury.

Between 1990 and 2001, 908,000 short-term and long-term lost-time claims were reported to WorkSafeBC. Of these, 4,000 (0.5%) had industry code problems. An additional 22,000 (2.4%) were missing information on age or sex, leaving almost 900,000 lost-time claims. Although the coding system used is based on the Standard Industrial Classification System 1980 (SIC80), it has been modified to include specific industry groups that are more prevalent in B.C. (e.g., classification unit 703016 – *tree planting or cone picking* is not specifically included in the SIC80, but rather is under 0511 – *other forestry services*). However, these additions did not affect the allocation of each claim under the broad category of goods or services. A full description of the allocation procedures used is available from the authors.

### Denominators

Denominators for lost-time claims were estimated using Statistics Canada's **Labour Force Survey** (LFS). The LFS is a monthly survey that uses a rotating panel design (respondents remain in the panel for six months) to estimate month-to-month changes in Canadian labour force participation among the civilian, non-institutionalized population aged 15 and older. The survey collects information on both employment status and hours worked.

Federal government employees and the self-employed were not included in the denominator for either Ontario or British Columbia. Denominator estimates for Ontario were further adjusted to represent differing insurance coverage across industry groups. Methods for this adjustment have been more extensively described elsewhere (Smith, Mustard and Payne 2004).

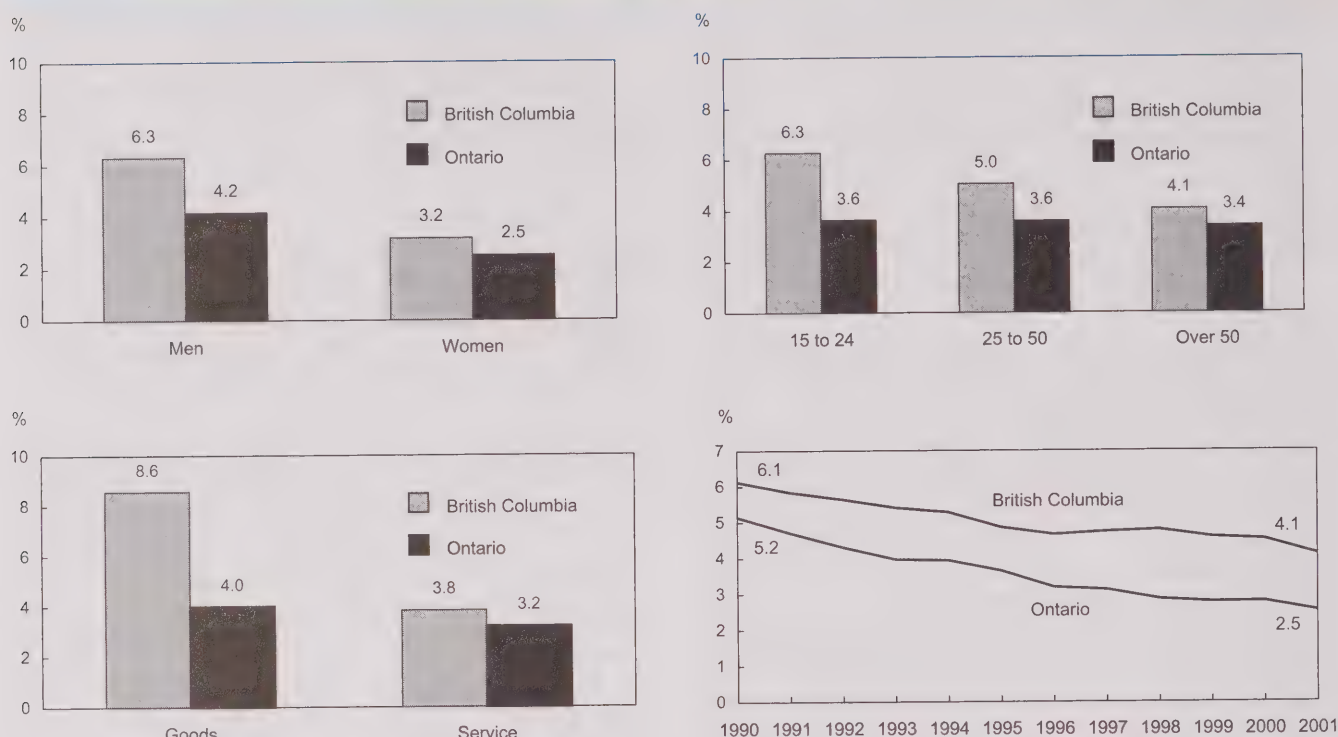
Given the notable difference in missing industry codes between Ontario and British Columbia (2% versus 0.2% of claims), a sensitivity analysis was performed to determine whether adding these claims (which did contain information on age and sex) would substantially alter claim rates. That is, it was assumed that all claims missing industry data in Ontario were from workplaces with mandatory coverage. Including these in the calculation of age-sex rates did not substantively alter any of the conclusions in this paper.

Unadjusted rates of lost-time claims per 100 full-time equivalents (FTEs) per year were calculated by each age, sex, and industry combination. A **full-time equivalent** employee was estimated to represent 2,000 hours worked per year. Adjusted claim rates were calculated using direct standardization methods (Hennekens and Buring 1987). This method corrects crude injury rates to account for, in the case of this analysis, differences between Ontario and British Columbia in industry, age, and male-female composition of the labour force. That is, the rate of injury for male labour force participants, as presented in Table 2, is the rate expected if male workers in Ontario and British Columbia had identical participation rates across industry and age groups. A similar procedure was used to calculate adjusted claim rates across age and industry groups. The percentage change in adjusted lost-time claim rates per 100 FTEs was calculated between 1990 and 2001 and compared between provinces.

The claim rates calculated with LFS denominators tended to be higher than those reported by the respective compensation boards. For example, in 2001, the overall claim rate for British Columbia was reported as 3.6 per 100 workers whereas using LFS data as the denominator led to a rate of 4.1 per 100 FTEs (AWCBC 2005). The Association of Workers' Compensation Boards of Canada report also shows the 2001 Ontario claim rate of 2.4 per 100 workers while the LFS method led to a rate of 2.5 per 100 FTEs. This pattern suggests that LFS denominators, adjusted to directly estimate the hours contributed by part-time and full-time workers, provide a smaller estimate of the provincial workforce than the payroll method of calculating denominators.



**Chart** Lost-time claims per 100 full-time equivalent employees, 1990 to 2001



Sources: Workplace Safety and Insurance Board (Ontario); WorkSafeBC; Statistics Canada, Labour Force Survey

Variation between Ontario and British Columbia in overall work injury trends may be partly explained by differences in patterns of economic change. For example, British Columbia, which had higher initial rates and smaller subsequent declines, continues to have a large primary industry employment base (agriculture, fisheries, forestry, mining). Compared with Ontario, B.C. may have experienced less of a shift away from these higher risk industries toward the relatively safer service and retail sectors (Ostry 2000). This pattern does not appear to be the entire story, however, because even within sectors, declines varied. Most notably, the service industry in British Columbia showed a reduction in claim rates that was less than Ontario's. The extent to which these provincial variations represent differences in hazard exposure or safety improvement warrants further investigation.

### Injury claim rates lower for women and older workers

While injury claim rates were lower for women than for men in both British Columbia and Ontario, the difference was more pronounced in British Columbia (Table). For example, in 2001, the adjusted claim rate for men in B.C. was 5.4 per 100 full-time equivalents and only 3.0 for women. This compares with 2.8 and 2.0 in Ontario. Interestingly, the men's claim rate in B.C. was almost double Ontario's, even after being adjusted for industry and age. Additionally, although claim rates decreased for both men and women in the two provinces between 1990 and 2001, the reduction was more pronounced in Ontario—more than 50% for men and about 40% for women. In British Columbia, the comparable figures were 38% and 10%, suggesting that factors other than changing industry and age composition play a role in injury claim rates.

**Table Adjusted lost-time claims per 100 full-time equivalent employees**

	1990 <sup>1</sup>	2001 <sup>1</sup>	Change
<b>Age group</b>		%	
British Columbia			
15 to 24	9.6	6.7	-30.0
25 to 50	7.2	4.8	-34.1
Over 50	5.5	3.7	-33.5
Ontario			
15 to 24	5.5	3.0	-45.4
25 to 50	5.2	2.5	-51.7
Over 50	4.7	2.3	-50.9
<b>Sex</b>			
British Columbia			
Men	8.8	5.4	-38.3
Women	3.3	3.0	-9.9
Ontario			
Men	6.1	2.8	-53.4
Women	3.3	2.0	-40.6
<b>Industry</b>			
British Columbia			
Goods	9.9	6.0	-39.7
Service	4.5	3.6	-19.8
Ontario			
Goods	5.9	2.7	-53.9
Service	4.5	2.4	-47.3

1. Claim rate adjusted for all other variables included in the table.  
 Sources: Workplace Safety and Insurance Board (Ontario); WorkSafeBC; Statistics Canada, Labour Force Survey, 1990 to 2001

Of particular interest are young workers, who historically have had a higher risk of workplace injuries. Several factors may account for this. First, they are relatively inexperienced (Breslin and Smith 2006). Secondly, they are often concentrated in the service and retail industry (NRC/IM 1998), so de-industrialization may not cause their work injury rates to fall to the same degree as for adult workers (Loomis et al. 2004). Finally, they are often in precarious jobs (part-time, temporary or contract work) and may not receive work-safety training, which is often targeted to full-time employees (Quinlan, Mayhew and Bohle 2001). Injury prevention initiatives have been implemented in Canada and the United States to increase young workers' awareness of work safety and hopefully reduce their injury rates.

In both British Columbia and Ontario, injury rates were highest for young workers aged 15 to 24 in 1990. As with overall injury rates, injury rates for these workers were higher in B.C. than in Ontario. In B.C., for every 100 full-time equivalents aged 15 to 24, almost 10 had experienced some type of workplace injury, while the corresponding figure in Ontario was slightly less than 6.

Injury rates for young workers fell significantly between 1990 and 2001—by 30% in B.C. and more than 45% in Ontario. However, the decrease was smaller than for any other age group and their rates remained the highest, indicating that the focus on injury prevention among young workers continues to be important.

Older workers still had the lowest injury rates per 100 full-time equivalents. In 2001, the rate was 3.7 per 100 in British Columbia and 2.3 in Ontario, even after adjusting for differences in industry, age, and male-female composition of the workforce.

### Claim rates lower in the service industry

Industries were broken down into goods-producing and service-producing. Goods-producing industries were agriculture, fishing, forestry, mining and oil, manufacturing, and construction. Service industries were transportation; communication; trade; finance and insurance; real estate; business services; government services; education; health and social services; and accommodation, food and beverages.

Not surprisingly, the service sector had lower injury rates than the goods sector in both provinces in 1990 and 2001, with B.C.'s rates continuing to be slightly higher than Ontario's in each category. Again, although injury rates decreased in both provinces over the period for both goods- and service-producing industries, declines were much more pronounced in Ontario, even after controlling for age and sex. One explanation may have to do with industry mix. For example, the composition of goods-producing industries within each province is significantly different, with employment in British Columbia more concentrated in 'riskier' sectors such as forestry and mining, while Ontario's is centered around manufacturing industries, which have seen many technological improvements.

Traditionally, injury rates have been higher in the goods sector than in services. This holds in both provinces, although substantial declines in injury rates have been

seen, suggesting improved safety measures (Conway and Svenson 1998). However, the adjusted claim rate in B.C. in 2001 for the service sector was 3.6 per 100, while in Ontario the goods-producing industry was lower at 2.7. As well as being a result of differences in industry composition within the goods and service sectors, differences between the provinces may be, in part, a result of different claim reporting practices by employers and compensation boards.

Finally, these overall declines could partly be due to the different nature of injuries in goods and services. Compensation systems may not be as sensitive at picking up chronic injuries, common to service-type work, compared with acute injuries, associated more with resources and manufacturing.

## Summary

Overall, work injury claim rates declined in both Ontario and British Columbia between 1990 and 2001. However, declines were not uniform by province, industry, or demographic group.

Although men's injury rates declined more than women's, women still had lower overall rates in both provinces. Additionally, the youngest age group, which had the highest initial claim rates, had larger absolute declines than the oldest age group. However, the percentage decline for young workers was the lowest of all age groups.

Injury rates declined in both goods and service industries in both provinces. The decline was much more pronounced in Ontario and may be partly a result of greater de-industrialization in the Ontario economy—that is, a move away from goods-producing industries toward services.

The general decline in the overall claim rates of both provinces is encouraging. Nevertheless, differences in trends and relative risks among worker subgroups in the two provinces serve to draw attention to opportunities to reduce the injury risks workers encounter.

This study was supported by a grant from the Workplace Safety and Insurance Board, Research Advisory Council, # 02-007.

## Note

1 Federal government employees in Ontario are indirectly covered by the WSIB. Claims are assessed by the WSIB, but compensation is paid by the federal government.

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# The GST credit

Raj K. Chawla

**T**he federal goods and services tax (GST) was introduced in 1991. Unlike its predecessor, the manufacturers' sales tax, which was levied only on manufactured goods, the GST applies to almost all goods and services. Initially set at 7%,<sup>1</sup> GST is charged over and above any provincial sales tax.<sup>2</sup>

Unlike income tax where the rate increases with income, the GST is levied at the same rate for everyone. As a result, low-income consumers end up paying relatively more of their income in GST than those with higher incomes. To alleviate some of the burden on low-income Canadians, the federal government introduced a GST tax credit. The credit is tied to personal income rather than the amount of GST paid. Besides personal income, the credit amount depends on marital status, number of children, and spousal net income as reported in the previous year's tax return.<sup>3</sup> The credit is adjusted for inflation as measured by the change in the consumer price index. Recipients are issued a cheque on the 5<sup>th</sup> of January, April, July, and October.

This article looks at issues surrounding the GST and the GST credit. How important is the GST as a source of federal government revenue? How does

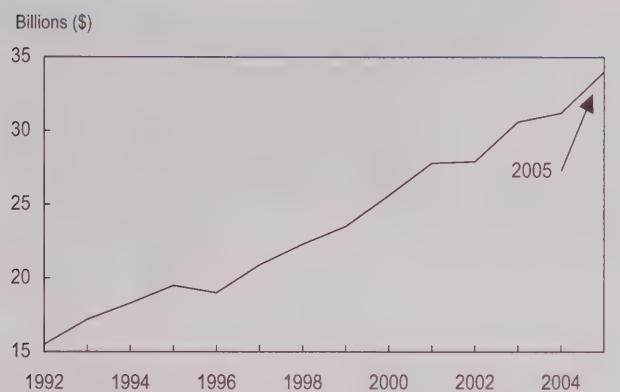
it relate to personal disposable income and other consumption taxes? How much of the entire GST take is paid back to individuals? How many are receiving the GST credit, and who are they? Does the credit help redistribute income? The 2003 Survey of Labour and Income Dynamics (SLID), and federal revenue and expenditure data are used to answer these questions.<sup>4</sup>

## The family perspective

Since the economic well-being of an individual also depends on family income rather than just personal income, those who qualify for the GST credit are not necessarily disadvantaged. An example would be a young adult living with parents and working part time at a low-paying job. Another reason to look at the GST credit in a family income context is that the majority of recipients 16 and over, other than unattached individuals, are from multiple-earner families or those with more than one recipient (for instance, a child and another relative of the major income recipient living in the same family).

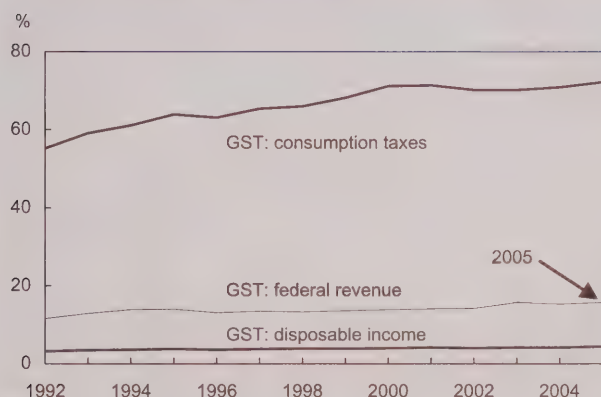
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**Chart A GST revenue has risen steadily since its introduction**

Source: Statistics Canada, Federal government revenue and expenditure

Government revenue from the GST has climbed steadily, from \$15.5 billion in 1991/1992 to \$34.0 billion in 2004/2005 (in current dollars). The rise can be attributed to increased consumer spending, which in turn has been influenced by factors such as population growth, family make-up, favourable economic conditions, higher income levels, easier credit, lower interest rates, and changing spending patterns. A spending spree between 2002 and 2005 alone accounted for 33% of the increase in GST collected since 1991/1992.

**Chart B GST is the major consumption tax and a key source of federal government revenue**

Source: Statistics Canada, Federal government revenue and expenditure

amusement. The GST accounted for 72% of consumption taxes in 2004/2005 compared with 55% in 1991/1992.

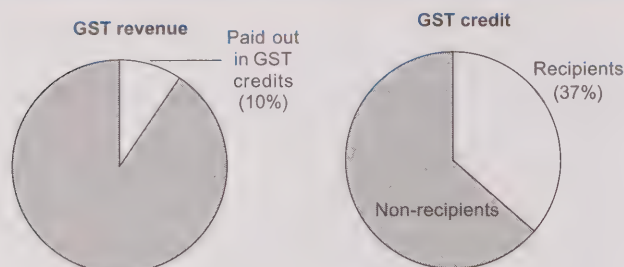
While the relative importance of other consumption taxes has declined, the GST share of federal revenue rose from 12% in 1991/1992 to 16% in 2004/2005. However, between 2000 and 2005, GST intake grew almost twice as much as total federal revenue—33% versus 18%.

GST is paid from personal disposable income—that is, total income less income tax, Canada or Quebec Pension plan contributions, and Employment Insurance premiums. Canadians paid 4.4% of their disposable income in GST in 2005 compared with 3.2% in 1992. Over this period, the growth in GST paid also outpaced income growth—120.0% versus 60.9%.

The GST is the main consumption tax in Canada. Others include customs duties as well as taxes on alcoholic beverages and tobacco products, gasoline, and



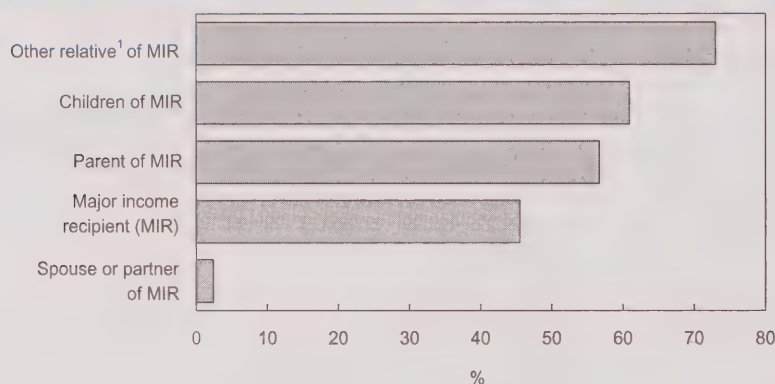
**Chart C Over one-third of persons 16 and older received a GST credit in 2003, accounting for 10% of all GST collected**



GST revenue in 2003 was \$30.6 billion. Of this, \$2.9 billion was paid back as a credit to 9.1 million of the 24.8 million taxfilers aged 16 and older, for an average of \$322 per recipient.<sup>5</sup> SLID treats this credit as a government transfer.

Sources: Statistics Canada, Federal government revenue and expenditure, 2003; Survey of Labour and Income Dynamics, 2003

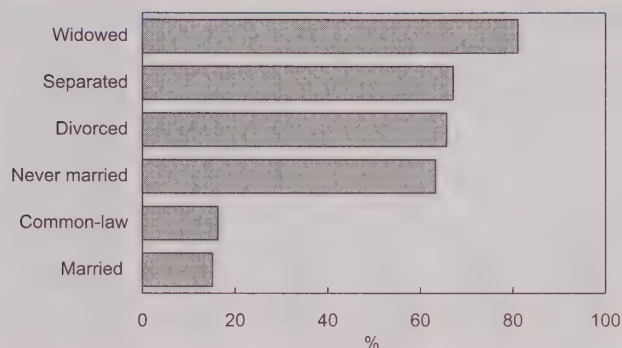
**Chart D Children and parents of major income recipients were more likely to receive a GST credit**



<sup>1</sup> Includes sibling, grandparent, grandchild and other relatives.  
Source: Statistics Canada, Survey of Labour and Income Dynamics, 2003

gram stipulates that only the one with the larger income can claim the credit. The high proportions of parents, siblings and grandchildren receiving the credit could be due to their relatively smaller representation among persons 16 and over, since they represented only 11% of all recipients.<sup>7</sup> Nevertheless, major income recipients accounted for 65%, and children for another 22%. These two groups therefore accounted for 87% of all GST credit recipients.

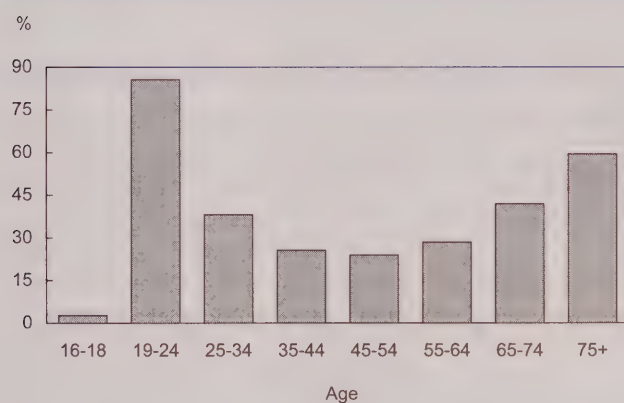
In economic families, major income recipients were less likely to receive a GST credit than children, grandchildren, parents or siblings of major income recipients.<sup>6</sup> Spouses or partners were least likely because the pro-

**Chart E More singles got a GST credit**

Source: Statistics Canada, Survey of Labour and Income Dynamics, 2003

Single individuals (never married) were more likely than married or common-law to receive a GST credit; and the widowed are more likely than single, separated, or divorced. This is largely due to income differences. For instance, married persons had a mean income of \$36,300 compared with \$19,700 for singles.

Among GST credit recipients in 2003, 48% were single; 28% were separated, divorced or widowed; and the remaining 24% were married or living common law. Their shares of the total credit were 41%, 29% and 30% respectively. Those who were not single had a larger credit share than their population representation, largely because some had young children living with them. The credit increases with the number of children in the family under 18.

**Chart F Young adults and seniors were more likely to receive a GST credit**

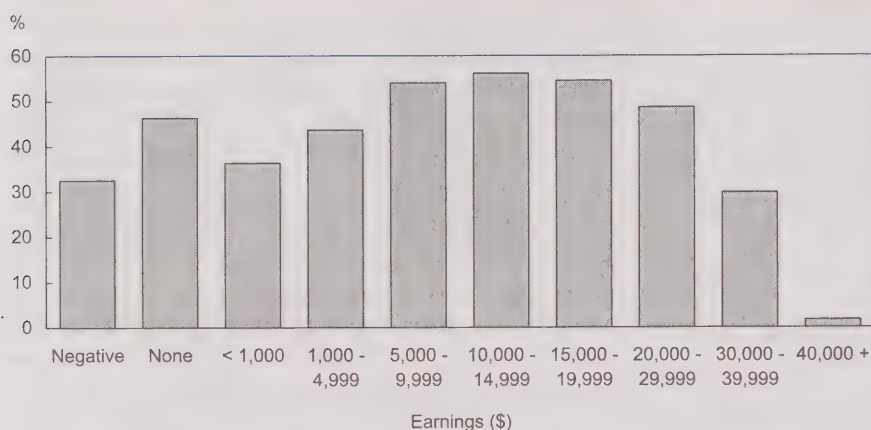
Source: Statistics Canada, Survey of Labour and Income Dynamics, 2003

in the 19-to-24 age group received a credit, as did 42% of those aged 65 to 74, and 59% of those 75 or older. One in four recipients was a young adult, and one in five was a senior. These two groups accounted for 45% of all recipients.

In the young adult category, 64% were children of major income recipients, and another 29% were themselves the major income recipient (likely unattached individuals). On the other hand, among seniors, 80% were major income recipients, and just over 10% were parents of major income recipients.

Among the young adults, 40% reported attending school as their major activity during the reference year, while 36% were working at a job or business. Overall though, half of persons 16 and over attending school (most likely a postsecondary institution) in 2003 received a GST credit.

Since young adults (19 to 24) and seniors (65 and over) both have lower incomes, they are much more likely to receive a GST credit. In 2003, 86% of those

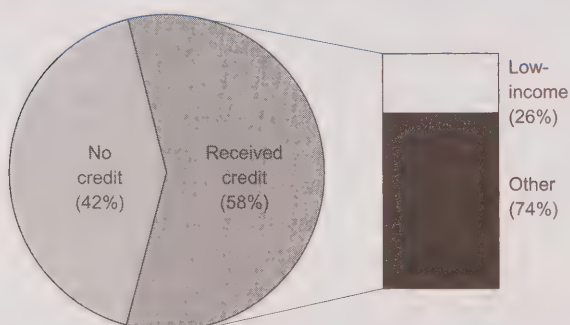
**Chart G** Persons with earnings between \$5,000 and \$20,000 were more likely than others to receive a GST credit

Source: Statistics Canada, Survey of Labour and Income Dynamics, 2003

\$14,999, while the rate for those with no earnings at all was 46%. The rate was under 2% for those with earnings of \$40,000 or more.

Among all recipients, 36% had no employment earnings, while 24% had earnings less than \$10,000. Among those with no earnings, nearly 70% were senior major income recipients, while 9% were parents and 12% were children of major income recipients. Among those with earnings under \$10,000, 48% were major income recipients, 3% were parents, and 39% were children.

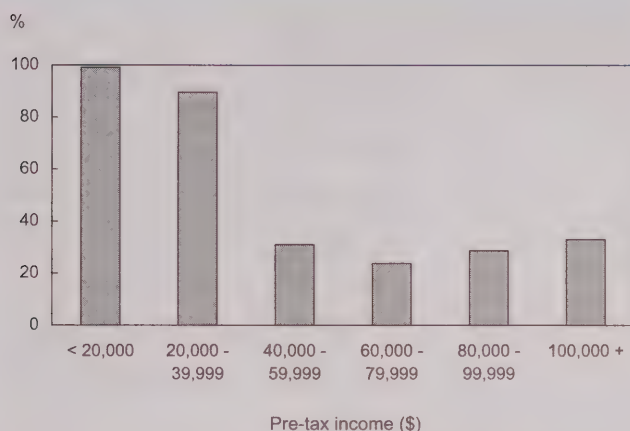
Since the GST credit is tied to personal income, it is not surprising that a higher proportion of low earners received a credit in 2003. The highest receipt rate (56%) was for those with earnings between \$10,000 and

**Chart H** Only a quarter of families receiving a GST credit were in low income

Source: Statistics Canada, Survey of Labour and Income Dynamics, 2003

According to SLID, the 9.1 million GST credit recipients in 2003 came from 7.5 million of the 13.0 million economic families in Canada. Among families receiving a credit, only 26% were classified as low-income according to Statistics Canada's low-income cutoff measures. In other words, the majority of families who received a GST credit were not considered to be in straitened circumstances. Their relative shares of the total \$2.9 billion GST credit were similar to their respective representations, resulting in an average credit of almost \$390 each.



**Chart I One-third of families with income of \$100,000 or more received a GST credit**

Source: Statistics Canada, Survey of Labour and Income Dynamics, 2003

Almost all families with income under \$20,000 received a GST credit. This compared with 90% of those with income between \$20,000 and \$39,999,

dropping to 24% for families with income between \$60,000 and \$79,999, and then rising to 33% for those with income of \$100,000 and over.

This variability by income is largely due to differences in family make-up. For instance, among those with income under \$20,000, 76% were unattached individuals, 12% were couples, and 8% were lone parents. Among families with income of \$100,000 and over, on the other hand, 85% consisted of couples living with children or other relatives, and another 11% were non-senior, multiple-earner families. This indicates that GST credit recipients in high-income families are children, parents, or other relatives of the major income recipient.

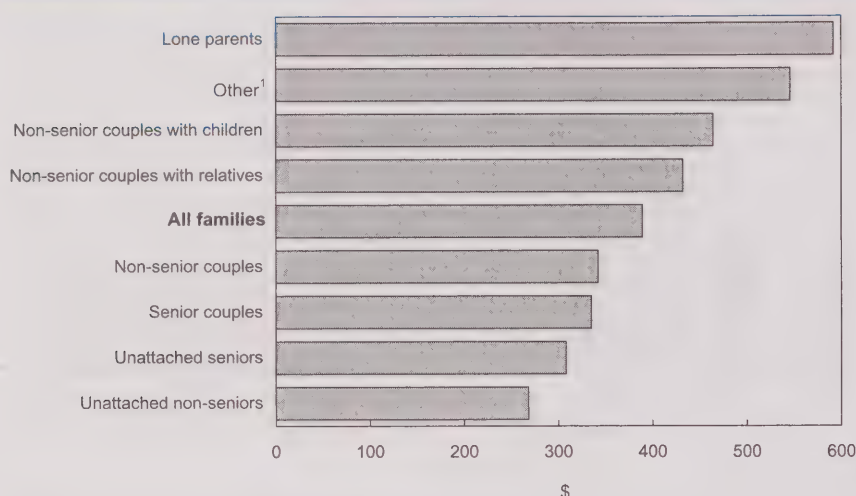
Overall, 72% of families reporting a GST credit had income under \$40,000, 20% had between \$40,000 and \$99,999, and only 8% had \$100,000 or more.

**Chart J Non-senior couples without children or relatives were least likely to receive a GST credit**

<sup>1</sup> Includes families other than those consisting of couples or lone parents.  
Source: Statistics Canada, Survey of Labour and Income Dynamics, 2003

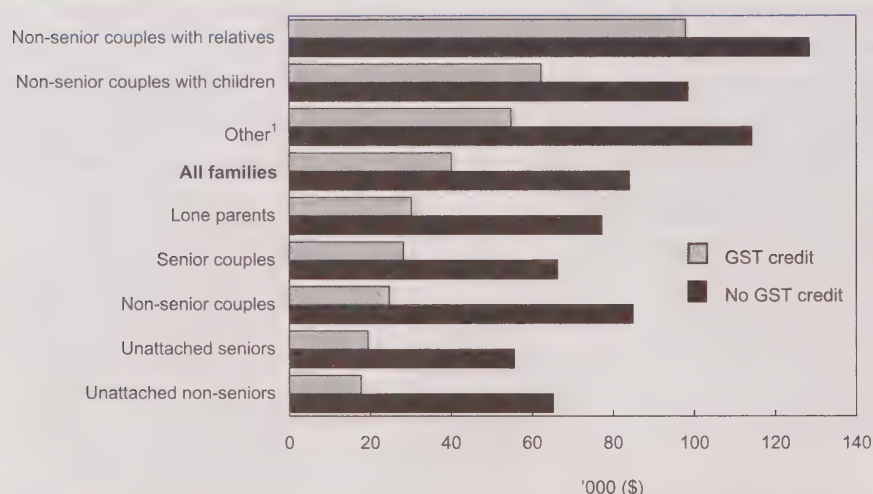
The proportion of families receiving a GST credit differed by family type; for instance, 23% of non-senior couples without children or other relatives received a credit, compared with 69% of non-senior unattached individuals. The senior equivalents of these two groups had higher proportions (45% and 81% respectively). Credits were more common in families composed of a non-senior couple living with relatives, in lone-parent families, and in other families (ranging between 86% and 92%).

Unattached individuals and lone-parent families accounted for about 50% of GST credit recipients and couple families for another 38%, the majority living with relatives other than children.

**Chart K On average, lone-parent families received a larger GST credit than other families**

<sup>1</sup> Includes families other than those consisting of couples or lone parents.  
Source: Statistics Canada, Survey of Labour and Income Dynamics, 2003

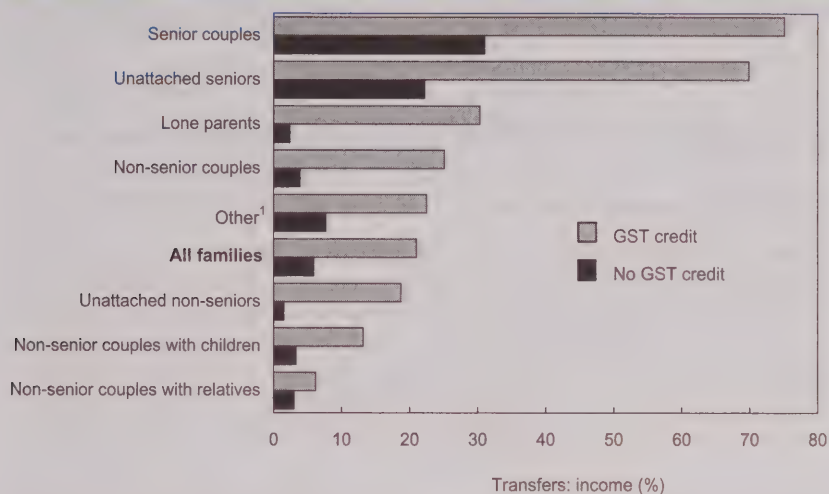
Lone-parent families (headed mostly by women) received the highest GST credit—\$592 compared with the national average of \$389. Their couple counterparts with children received \$464. Non-senior unattached individuals received the least credit (\$268) while their senior counterparts received \$308. The average credit of \$389 increased the purchasing power of recipients by \$1.07 a day.

**Chart L Families receiving a GST credit had lower incomes than other families**

<sup>1</sup> Includes families other than those consisting of couples or lone parents.  
Source: Statistics Canada, Survey of Labour and Income Dynamics, 2003

The average income of families who received a GST credit was \$40,100, compared with \$84,000 for those not receiving a credit. (The lower income for those receiving the credit can be partly attributed to family make-up: more unattached non-seniors and lone-parent families). The GST credit of \$389 thus narrows the income gap between recipients and non-recipients by less than 1%.

Irrespective of family type, the mean income of those with a credit was less than those without, with the largest gap for unattached non-seniors (73%) and the smallest gap for non-senior couples living with relatives (24%).

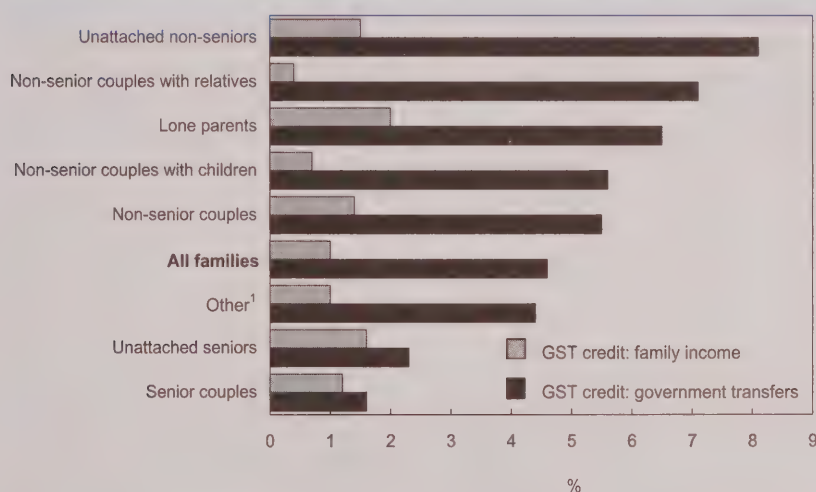
**Chart M Families with a GST credit received more in government transfers**

1 Includes families other than those consisting of couples or lone parents.  
Source: Statistics Canada, Survey of Labour and Income Dynamics, 2003

\$8,431 compared with \$4,977 to other families. Because of their relatively lower incomes and higher transfers, families with a GST credit drew proportionately more income from government transfers—21% compared with 6% for those not receiving the credit.

The transfer-to-income ratio also varied by family type; for instance, senior couples and unattached seniors who received a GST credit drew most of their income from government transfers (75% and 70%), whereas their counterparts without a credit drew 31% and 22%. The ratio gap was much smaller for non-senior couples.

Of the total \$90.9 billion transferred from governments to families in 2003 (including the \$2.9 billion GST credit), \$63.5 billion (or 70%) was paid to families who received a GST credit.<sup>8</sup> The average transfer was

**Chart N The GST credit is too small to have an effect on income redistribution**

1 Includes families other than those consisting of couples or lone parents.  
Source: Statistics Canada, Survey of Labour and Income Dynamics, 2003

Compared with total pre-tax family income of \$764.7 billion, the \$2.9 billion GST credit is too small to have much impact on the redistribution of income among families. Overall, the GST credit represented 5% of total government transfers and just 1% of recipient family income.

These ratios varied by family type; for example, for lone-parent families, the GST credit represented 6.5% of government transfers and 2.0% of pre-tax income. The respective estimates for non-senior couples with children were 5.6% and 0.7%. For both non-senior and senior unattached individuals, the GST credit represented just 1.5% to 1.6% of income.



## Summary

In 2002/2003, the federal government collected \$30.6 billion in GST. The GST accounted for 70% of consumption tax revenue and 16% of total government revenue. The government paid out \$2.9 billion in GST credits to 9.1 million persons aged 16 and over (or 7.5 million economic families). Major income recipients in economic families (including unattached individuals) accounted for 65% of all GST recipients, and children of major income recipients for another 21%. Although credits are designed to soften the burden of GST for families with lower incomes, only 26% of the total credit was paid to low-income families. Families with a GST credit received, on average, \$389, which represented 5% of their total government transfers or 1% of pre-tax income. Thus the GST credit has only a minimal effect on the redistribution of income.

### Perspectives

#### ■ Notes

- 1 According to the budget of May 2, 2006, the GST will drop to 6% on July 1, 2006. Another decrease to 5% is promised over the next five years. Based on the \$34 billion collected in 2005, a one-point reduction would mean a loss of almost \$5 billion in government revenue.
- 2 Alberta is the only province with no sales tax. Newfoundland and Labrador, New Brunswick and Nova Scotia have integrated their provincial sales tax with the GST, charging their residents only one tax, referred to as the harmonized sales tax, or HST.
- 3 For the year July 2003 to June 2004, the maximum credit was \$216 for an eligible adult and \$114 for each eligible child under 19. A couple with net income of less than \$7,022 and no children received a maximum credit of \$432, while a couple with one child could receive \$546. On the other hand, a family with one child was not entitled to a credit if their income was \$40,000 or more. Only one spouse in a family can claim the credit. For details on credit entitlement by marital status, number of children, and income level, visit the Canada Revenue Agency Web site at [http://www.cra-arc.gc.ca/benefits/gsthst/gstc\\_payment02-e.html](http://www.cra-arc.gc.ca/benefits/gsthst/gstc_payment02-e.html).
- 4 How the GST affects prices of goods and services in a market economy is beyond the scope of this study.
- 5 According to the Canada Revenue Agency, 9.4 million taxfilers received a GST credit between July 2003 and June 2004. The total amount paid was \$3.1 billion, for an average of \$325 per recipient. Since income information in SLID is derived mainly from authorized tax records, global statistics from both sources are very close. This paper uses SLID because it provides more detail on characteristics of individuals and their families.
- 6 This paper looks at persons 16 and older living as unattached individuals or in economic families. Unattached individuals live by themselves or in a household where they are not related to other household members. An economic family is a group of persons sharing a common dwelling and related by blood, marriage, common law, or adoption. Thus, all relatives living together are considered as one family unit, whatever the degree of family relationship.
- 7 The charts show the proportions who received a GST credit, whereas the percentage distributions of recipients are from unpublished data (available on request).
- 8 Besides the GST credit, government transfers include benefits from Old Age Security, the Guaranteed Income Supplement, the Allowance, Employment Insurance, the Canada and Quebec Pension Plans, the Child Tax Benefit, social assistance, provincial assistance and tax credits, and workers' compensation.

**We welcome your views** on articles and other items that have appeared in *Perspectives*. Additional insights on the data are also welcome, but to be considered for publication, communications should be factual and analytical. We encourage readers to inform us about their current research projects, new publications, data sources, and upcoming events relating to labour and income.

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# Increased work stoppages

Ernest B. Akyeampong

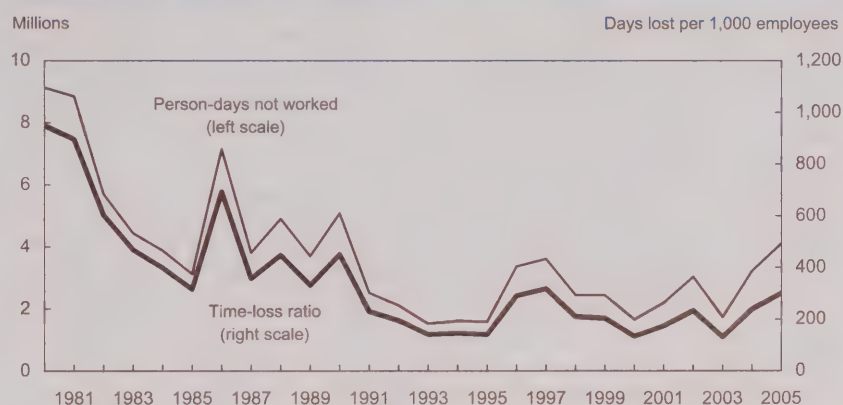
**T**ime lost to strikes and lockouts has always attracted widespread attention because of the economic and social upheavals that often accompany industrial disputes. Given increasing economic globalization and trade liberalization, the interest appears to be gaining strength since international differences can influence corporate decisions on plant or office location (see *Differing collection methods*). Available statistics demonstrate considerable improvement in Canadian industrial relations over the years. However, a surge in strikes and lockouts and the resulting time lost in the past couple of years may be a source of concern.

Using Statistics Canada's Labour Force Survey and information compiled by Human Resources and Social Development Canada, this study briefly examines trends in work stoppages over the past 25 years. Particular attention is focused on the most recent years (2003 to 2005) in an examination of their incidence by industry and jurisdiction (provincial or federal), the main areas of dispute, and how the stoppages ended.

## Downward trend in days lost

Analysis of year-over-year changes and trends in labour-dispute statistics is always problematic. The annual data are affected by many factors, among them collective bargaining timetables (in particular, the

**Chart** Person-days not worked due to labour disputes and the time-loss ratio both trended down over most of the 1980s and 1990s, but appear to be edging up in the 2000s



Sources: Human Resources and Social Development Canada, Workplace Information Directorate; Statistics Canada, Labour Force Survey

number and duration of agreements), size of the parties involved, duration of the stoppages, state of the economy and labour market, changes in industrial relations legislation, and labour-management relations. Other contributing factors include changes in union density (the proportion of employees unionized), and union tactics. Isolating the effects of each of these numerous factors is a statistically daunting task, not attempted in this paper.

Nevertheless, the overall downward trends observed in both the number of industrial disputes and the resulting days lost during the 1980s and 1990s appear to have stalled somewhat in recent years (Chart).<sup>1</sup> Work stoppages due to strikes and lockouts fell from an annual average of 754 in the 1980s, to 394 in the 1990s, to 319 in the 2000s. Workdays lost averaged 5.5 million annually in the 1980s, 2.6 million in the 1990s, but 2.7 million in the 2000s (Table 1).

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Using a time-loss ratio of the number of workdays lost per 1,000 employees enables more meaningful comparisons of annual work-stoppage statistics. After thus controlling for the rise in employee numbers, the time-loss ratio reveals an overall declining trend: from an annual average of 541 workdays lost per 1,000 employees in the 1980s, to 233 in the 1990s, to 203 in the 2000s.

### Time lost surges in 2004 and 2005

Despite the progress achieved in Canada's labour-relations statistics over the past few decades, the slight increase in the number of strikes and lockouts and the proportionately larger increases in the resulting workdays lost and time-loss ratios, especially in the last two years (2004 and 2005), raise concerns.

The number of strikes and lockouts beginning in each of 2004 and 2005 stalled at 261, but this was still slightly more than in the two preceding years. However, the number of workers involved in the disputes, the workdays lost, and the time-loss ratios all witnessed consecutive large increases. For example, workers involved in the 2005 stoppages totalled 429,000 (a five-fold jump from 2003), while the workdays lost, at 4.1 million, was almost 2.5 times the 2003 figure. Similarly, the time-loss ratio in 2005, at 301, was more than twice the level in 2003.

Some of the increase in workdays lost in the past two years can undoubtedly be apportioned to a rise in the number of workers involved (that is, relatively large unions were involved in the recent disputes) and also partly to the long duration of some of the stoppages.

Whatever the reasons, the timing of the latest increases raises questions. Could continuing declines in the unemployment rate and the emergence of pockets of labour shortage have played a part in the resurgence? Could these developments have spurred organized labour to flex its muscle?

Whether this is the beginning of a new trend is uncertain. What can be done now, however, is to look most closely at the nature of the

stoppages in recent years. In which jurisdictions did they occur? What were the major issues? And, how were they resolved? The answers could provide clues for minimizing future labour disputes.

### Most disputes in 2003 to 2005 union initiated

According to Human Resources and Social Development Canada, bargaining timetables vary from union to union, but the average life

**Table 1 Strikes and lockouts and person-days not worked**

	Work stoppages			Employees	Time-loss ratio <sup>2</sup>
	Started	Total <sup>1</sup>	Workers involved	Person-days not worked	
			'000	'000	'000
1980	952	1,028	452	9,130	9,621
1981	943	1,049	342	8,850	9,880
1982	611	679	464	5,702	9,461
1983	576	645	330	4,441	9,479
1984	653	716	187	3,883	9,732
1985	762	829	164	3,126	9,901
1986	657	748	486	7,151	10,313
1987	579	668	582	3,810	10,634
1988	483	548	207	4,901	10,936
1989	568	627	445	3,701	11,195
1990	519	579	271	5,079	11,250
1991	399	463	254	2,516	10,962
1992	353	404	152	2,110	10,803
1993	323	381	102	1,517	10,782
1994	312	374	81	1,607	11,030
1995	282	328	149	1,583	11,212
1996	297	330	276	3,269	11,250
1997	229	284	258	3,608	11,357
1998	341	381	244	2,444	11,641
1999	358	413	160	2,443	11,974
2000	321	379	144	1,657	12,391
2001	324	381	221	2,199	12,670
2002	246	294	168	3,033	12,996
2003	221	266	81	1,736	13,271
2004	261	298	260	3,225	13,494
2005	261	293	429	4,107	13,658

<sup>1</sup> Total includes number beginning in year plus those continuing from previous year.

<sup>2</sup> The number of workdays lost due to strikes and lockouts per 1,000 employees (*Person-days not worked* divided by *Employees*).

Sources: Human Resources and Social Development Canada, Workplace Information Directorate; Statistics Canada, Labour Force Survey



## Differing collection methods

Because of differences in definitions and statistical coverage, international comparisons of labour dispute statistics must be made with caution.

Many countries rely on voluntary notification of a dispute to a national or local government department. In Canada, the data reflect all work stoppages that come to the notice of Human Resources and Social Development Canada's Workplace Information Directorate. Also, many countries, including Canada, do not measure work time lost at establishments whose employees are not involved in a dispute but who are unable to work because of a shortage of materials supplied by establishments on strike.

In addition, significant differences exist in the threshold used by countries to determine whether a particular stoppage should be entered in the official records. Most countries exclude small stoppages (judged by the number of workers involved, the length of the dispute, or the number of days lost) from the statistics. In particular, the threshold for inclusion is very high in the United States (1,000 workers) and in Denmark (100 workdays lost). In Canada, the threshold is 10 or more person-days lost.

Some countries also exclude disputes in certain industrial sectors. For example, Portugal excludes public-sector strikes. Several others exclude certain types of disputes: Portugal excludes general strikes, Japan excludes days lost in unofficial disputes, and the United Kingdom excludes so-called political work stoppages. No such exclusions exist in Canada.

Finally, the inclusion of workers indirectly involved in a stoppage, namely those who are unable to work because others at their workplace are on strike, varies among countries. Many countries, including the United States, the United Kingdom, France and Australia, attempt to include these workers while others, including Canada, Germany and Italy, exclude them. A complete description of international coverage and methodology differences is contained in a technical note in the journal *Labour Market Trends* (vol. 109, no. 4, p. 201), published by the U.K. Office for National Statistics.

of a collective bargaining contract is roughly three years. To obtain a better appreciation of industrial strife statistics in recent years, one needs to examine a dataset that more fully accommodates the different timetables. For this study, data covering 2003 to 2005 were pooled. Not only is this dataset more statistically robust, but also the chosen period captures information encompassing two different faces of the labour strife cycle: The year 2003 was relatively peaceful, while 2004 and 2005 were less so.

Of the 743 labour stoppages that commenced between 2003 and 2005, 622 (84%) were initiated by unions (strikes), and the rest by employers (lockouts). Approximately 7.9 million of the 9.1 million workdays lost (87%) were attributable to strikes (Table 2).

## Large share of stoppages in Quebec, in manufacturing, and in education and health

Only 41 (6%) of the strikes and lockouts over the period occurred in areas under federal jurisdiction (workers under the Public Service and Staff Relations Act such as the federal public service, and those under the Canada Labour Code such as in banks and other financial institutions, and telecommunications). The rest occurred in areas under provincial jurisdiction. Quebec, the province with the highest union density, posted the largest share of strikes and lockouts (336 or 45%), followed by Ontario (230 or 31%). (For

**Table 2 Strikes and lockouts and person-days not worked by jurisdiction, 2003 to 2005**

	Strikes and lockouts		Days not worked	
		%	'000	%
<b>Canada</b>	<b>743</b>	<b>100</b>	<b>9,068</b>	<b>100</b>
Newfoundland and Labrador	22	3.0	523	5.8
Prince Edward Island <sup>1</sup>	..	..	1	...
Nova Scotia	10	1.4	80	0.9
New Brunswick	19	2.6	177	2.0
Quebec	336	45.2	2,684	29.6
Ontario	230	31.0	1,385	15.3
Manitoba	20	2.7	47	0.5
Saskatchewan	19	2.6	104	1.1
Alberta	8	1.1	113	1.2
British Columbia	38	5.1	1,007	11.1
<b>Total provincial</b>	<b>702</b>	<b>94.5</b>	<b>6,121</b>	<b>67.5</b>
<b>Total federal</b>	<b>41</b>	<b>5.5</b>	<b>2,947</b>	<b>32.5</b>

1 No new work stoppages were reported in Prince Edward Island for 2003 to 2005. The days not worked are from a stoppage that started in 2002.

Note: Data may not add to total due to rounding.

Sources: Human Resources and Social Development Canada, Workplace Information Directorate; Statistics Canada, Labour Force Survey

union densities by province, sector, and industry, see the update on unionization, also appearing in this issue of *Perspectives*.)

Despite the small number of stoppages registered, workers under federal jurisdiction recorded the largest share of days lost (33%), followed by Quebec (30%) and Ontario (15%). Areas under federal jurisdiction contain several large unions, and relatively long strikes involving workers in some large bargaining units in 2005 contributed to the high number of workdays lost. Workers in British Columbia witnessed just 5% of strikes and lockouts, but 11% of the total workdays lost during the period.

More than a quarter (29%) of the strikes and lockouts took place in manufacturing, followed by education, health and social services (21%) (Table 3). Information and cultural industries saw only 2%, but accounted for almost a quarter of all workdays lost. A long strike involving a few large unions contributed to the large number of workdays lost in this industry. Manufacturing (17%); education, health and social services (16%); and public administration (17%) also registered relatively large shares of workdays lost.

### Most work stoppages centre on wages

A strike or lockout may be precipitated by more than one factor, but for those that commenced between 2003 and 2005, wages were the main bone of contention. Of respondents reporting a reason for the work stoppage, approximately one-half (51%) gave wages or non-wage benefits as the major one.<sup>2</sup> Another 35% cited delays in the bargaining process or lack of trust in the bargaining sincerity of the opponent. Another 9% saw job security and subcontracting as the major issues, while 5% mentioned poor working conditions, poor labour-management relations, and disrespect of union rights.

### Most stoppages ended by agreement

The resolution of a work stoppage can take many forms. The most common is agreement between the opposing parties. Such agreements are often reached without a third party, but sometimes the services of an arbitrator or adjudicator are called upon. Of the strikes and lockouts resolved between 2003 and 2005, about 77% ended after agreement was reached between the opposing parties. Approximately 18% of stoppages ended by employees voluntarily returning to work, while in 2% of the disputes, special legislation was

**Table 3 Strikes and lockouts and person-days not worked by major industry, 2003 to 2005**

	Strikes and lockouts		Days not worked	
		%	'000	%
<b>All industries</b>	<b>743</b>	<b>100</b>	<b>9,068</b>	<b>100</b>
Primary	19	2.6	454	5.0
Utilities	6	0.8	81	0.9
Construction	13	1.7	102	1.1
Manufacturing	212	28.5	1,572	17.3
Wholesale and retail trade	76	10.2	706	7.8
Transportation and warehousing	51	6.9	275	3.0
Information and cultural industries	12	1.6	2,202	24.3
Finance	48	6.5	82	0.9
Education, health and social services	159	21.4	1,454	16.0
Entertainment and hospitality	103	13.9	567	6.3
Public administration	44	5.9	1,573	17.3

Note: Data may not add to total due to rounding.

Sources: Human Resources and Social Development Canada, Workplace Information Directorate; Statistics Canada, Labour Force Survey

passed or an order from the Labour Relations Board was issued. Only a small proportion of work stoppages end with the closure of a plant or firm. For the 2003-to-2005 period, only 6 suffered this fate. About 13 stoppages were still continuing at the end of 2005.

### Conclusion

The improvements recorded during the 1980s and 1990s in Canada's strike and lockout statistics appear to have stalled somewhat in recent years. Improvements recorded at the beginning of the decade were offset by a deterioration in 2004 and 2005.

Approximately 84% of the 743 work stoppages and 87% of the 9.1 million resulting workdays lost from 2003 to 2005 were initiated by unions, the rest by employers. Areas witnessing disproportionately large shares of stoppages and resulting time lost included Quebec; workers under federal jurisdiction; manufacturing; and education, health and social services. Wage disputes constituted the main reason for about one-half of work stoppages between 2003 and

2005, and lack of faith in the bargaining sincerity of the adversary accounted for about a third. Most of the stoppages (77%) ended through agreements reached between the adversaries (with or without third-party assistance). Only a handful ended through a forced court order or legislation, or plant closure.

At this point it is not possible to determine whether the recent surge in time lost is due to a general change in the labour relations environment or a confluence of workplace-specific factors. Continuing to monitor the situation is important, since a deteriorating labour climate can have broader economic consequences.

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### Perspectives

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### ■ Notes

1 On the surface, it appears that business cycle effects on strikes and lockouts over the period have been minimal or inconsequential. For example, contrary to expectation, the numbers appear to be generally high during recession years as in the early 1980s, and low during the growth period preceding Y2K. Similarly, union density has been fairly flat, just over 30% for most of the period, even though both the strike statistics and time lost data fluctuated, suggesting that union density has had no perceptible influence on the series. Alternatively, any effects emanating from the business cycle or union density may have been offset by other factors.

2 Answers for the main reason(s) for the dispute were supplied in approximately one-third of the work stoppages observed.

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# What's new?

## *Recent reports and studies*

### ■ FROM STATISTICS CANADA

#### ■ *Head-office employment*

Domestic firms taken over by foreign firms created about as many new head offices as were closed. On average, head offices that continued to exist after a domestic firm was taken over maintained their level of employment.

Foreign-controlled firms were the dominant force driving growth in the number of head offices and head-office employment in Canada between 1999 and 2005. These firms accounted for about two-thirds of the net increase in head-office employment, and all the growth in the number of head offices.

Toronto has reinforced its position as Canada's leading centre for head offices in the business sector during the past six years, while Calgary experienced the strongest head-office employment growth of Canada's four major head office centres.

Calgary has now surpassed Vancouver by a wide margin as Western Canada's leading head-office centre. Montréal remains Canada's second most important head-office centre, but it has been losing ground to both Toronto and Calgary.

Head-office employment in Canada increased 10.7% to 174,882 from 1999 to 2005, slightly less than the 14% growth rate for the business sector as a whole. The number of head offices in Canada rose 4.2% to 4,161.

For more information, see the July 13, 2006 issue of *The Daily* on the Statistics Canada's Web site ([www.statcan.ca](http://www.statcan.ca)).

#### ■ *General Social Survey: Commuting times*

The average Canadian now spends nearly 12 full days a year getting to work and returning home.

Commuters spent an average of 63 minutes a day making the round trip between their place of residence and their workplace in 2005. That's the equivalent of nearly 275 hours of commuting, based on a 260-day work year. In 1992, they spent 54 minutes commuting; by 1998, that had risen to 59 minutes.

Average times were significantly higher in 2005 than in 1992 in five of Canada's six largest urban areas.

The longest commute was in metropolitan Toronto, where the average round trip took 79 minutes—roughly 340 hours, or two solid weeks, per work year.

But the increases were particularly large for residents of Calgary and Montréal. The round trip for people in metropolitan Montréal took 76 minutes last year, up from 62 minutes in 1992, the equivalent of 2.5 extra days a year.

In fast-growing Calgary, the round trip last year took an average of 66 minutes, 14 minutes longer than it did in 1992. In contrast, Vancouver workers spent no more time getting to work in 2005 than they did some 10 years earlier.

The average travel time rose for both car users and public transit users. But, as many people already know, despite problems of congestion, it is in most cases faster to use a car or other vehicle to get to work than public transit.

For more information, see the July 12, 2006 issue of *The Daily* on the Statistics Canada's Web site ([www.statcan.ca](http://www.statcan.ca)).

#### ■ *The death of a spouse and the impact on income*

Five years after the death of a spouse, the adjusted family income of senior widows had declined by more than 15%, while that of widowers was 5.8% higher.

Overall, 51% of widowers suffered a loss of adjusted income after five years compared with 72% of widows.

Not only did the adjusted income of widows decline, but more of them fell below the low-income threshold. After five years, 8.7% of widows were living in low income, compared with 5.1% of widowers.

For widows, the loss came mainly from lower pension income and earnings. For widowers, lower earnings contributed the most to the decrease in adjusted income.

For more information, see the July 10, 2006 issue of *The Daily* on the Statistics Canada's Web site ([www.statcan.ca](http://www.statcan.ca)).

### ■ **Education and labour market pathways of young adults**

More and more youth have undertaken postsecondary education, either at college, university or a private institution, and have taken their place in the labour market.

The Youth in Transition Survey (YITS), which tracked movements between high school, postsecondary education and the labour market, interviewed young people and measured their activities at three stages: in 1999, 2001 and 2003.

During this four-year period, nearly three-quarters of the young people underwent some form of transition, either between high school and postsecondary education or between their studies and the workplace.

The proportion of young people aged 22 to 24 who undertook some form of postsecondary education since the start of the survey rose steadily. In 1999, 62% of young people had gone to a postsecondary institution at some point. By 2003, over three-quarters (76%) had done so.

Over time, the proportion of youth who had graduated from a postsecondary institution soared. In 1999, 7% of young people were postsecondary graduates. By 2003, this proportion had increased more than six times to 44%.

As of December 2003, about one in every five young people aged 22 to 24 was still pursuing postsecondary accreditation and had not yet graduated.

For more information, see the July 5, 2006 issue of *The Daily* on the Statistics Canada's Web site ([www.statcan.ca](http://www.statcan.ca)).

### ■ **Employer pension plans (trusteed pension funds)**

The value of retirement savings held in trusteed pension funds approached \$800 billion at the end of 2005.

Funds increased in value for six straight quarters after the low of \$652.2 billion observed in the second quarter of 2004. They accumulated \$799.1 billion in the fourth quarter of 2005, a 2.9% rise over the previous three months. Since 1995, fund assets have more than doubled in value, while in the last five years, they have grown more than 30%.

Fourth quarter 2005 fund revenues and expenditures amounted to \$28.8 billion and \$9.6 billion respectively, for a net cash flow of \$19.2 billion, up 9.3% from the previous quarter.

Year over year, 2005 revenues declined for the first time since 2001. Revenues of \$94.2 billion were down 4.6%, following record-high revenues of \$98.8 billion in 2004. Expenditures for 2005 declined 31.1% due to higher than normal expenditures in 2004 that resulted from an employer cash withdrawal and transfer from an existing plan to a much smaller plan. With reduced expenditures, the cash flow for 2005 amounted to \$57.5 billion, a 26.6% increase over 2004.

Employer contributions increased significantly in the last five years, doubling from \$10.4 billion in 2001 to \$20.7 billion in 2005. For the third straight year, contributions exceeded benefits paid out.

The return on investment for 2005 was 9.0%, the same as in 2004 and double the returns of 4% to 5% achieved in 2001 and 2002.

In 2005, of the 5.7 million Canadian workers belonging to employer pension plans, about 4.6 million were members of trusteed plans. The remainder were covered by the consolidated revenue funds of the federal and provincial governments, or by insurance company contracts or Government of Canada annuities.

For more information, see the June 20, 2006 issue of *The Daily* on the Statistics Canada's Web site ([www.statcan.ca](http://www.statcan.ca)).

### ■ **Culture sector employment in rural Canada**

Proportionately fewer people are employed in the culture sector in rural Canada than in the nation as a whole.



In 2003, less than 3% of Canada's rural workforce was employed in the culture sector, compared with just under 4% of the country's total workforce.

Culture sector employment grew more quickly than overall employment in rural areas between 1996 and 2003. Rural cultural employment rose at about 2.6% per year, whereas overall rural employment increased at a rate of 1.5%.

Some sub-sectors have a higher share of rural residents than others. Between 1996 and 2003, about one-quarter of jobs in the heritage sub-sector and a little over one-fifth of jobs in the visual arts sub-sector were held by rural residents.

Meanwhile, less than one-tenth of jobs in the architecture, advertising and performing arts sub-sectors were held by rural residents.

Compared with both the average rural worker and the average culture worker, rural culture workers were more likely to be employed part time. Between 1996 and 2003, for Canada as a whole, less than 20% of total workers and about 22% of culture sector workers were employed part time. In comparison, 37% of rural culture sector workers were employed part time.

Rural areas of Newfoundland and Labrador reported the strongest growth in culture sector employment, with an average increase of 8% a year from 1996 to 2003. Alberta's rural areas also reported a strong culture sector employment growth of 6% a year on average during the same period.

For more information, see the June 12, 2006 issue of *The Daily* on the Statistics Canada's Web site ([www.statcan.ca](http://www.statcan.ca)).

### ■ **Employment and earnings among lone mothers**

Two major developments have been behind big gains in employment and earnings during the past two decades among lone mothers aged 40 and over.

Rising earnings among these individuals since 1980 were the result of aging among the baby-boom generation and the postwar revolution in the educational attainment of women. Among younger lone mothers, economic outcomes have been relatively stagnant.

Like married mothers, lone mothers were much better educated and significantly older in 2000 than in 1980. Gains in their aggregate employment and earnings reflected this.

In 1980, the population of lone mothers consisted predominantly of women born before 1950. However, during the 1980s and 1990s, they were increasingly replaced by baby boomers born in the 1950s and early 1960s, who had much higher levels of education and labour force attachment.

In 1981, three-quarters (76%) of all lone mothers were born before 1950; by 2001, this proportion had plunged to only 7%. During the same time frame, the proportion of lone mothers with postsecondary education increased from 28% to 49%. Generally speaking, the more highly educated are more likely to work and to earn higher wages than their less-educated counterparts.

Furthermore, during the 1990s, baby-boom mothers began entering their 40s, an age when both employment and earnings tend to be higher. The proportion of lone mothers who were aged 40 to 49 rose from 25% to 38%, while the proportion under 30 declined from 25% to 18%. Older, more experienced workers also tend to earn more than their less-experienced counterparts.

Largely as a result of these changes, employment rates among all lone mothers went up by 12 percentage points. At the same time, annual earnings among those employed rose by 16%, producing a substantial decline in the low-income rate of lone mothers.

For more information, see the June 7, 2006 issue of *The Daily* on the Statistics Canada's Web site ([www.statcan.ca](http://www.statcan.ca)).

### ■ **Canada's labour market at a glance**

Employment in Canada increased for the 13th consecutive year in 2005, the longest stretch of employment gains since the large-scale increases of the 1960s and 1970s. Over the last 13 years, employment growth has averaged 2.0% per year.

About 17.3 million people were in the labour market last year, 67.2% of the working-age population, a decline of 0.3 percentage points from 2004. Previously, the participation rate increased every year between 1996 and 2003, and held steady in 2004. Much of the decline in 2005 was the result of aging baby boomers, adult women and young people leaving the labour force.

With demand for labour strong and supply conditions tightening, the annual unemployment rate fell in 2005, hitting 6.8%, the lowest since 1976.



Other key developments in the labour market have taken place during the past few years. For example, the employment situation for older workers aged 55 and over became increasingly brighter. Last year, 29.9% of this population had jobs, up from 29.0% in 2004. This was the ninth consecutive annual increase in their employment rate since it hit a low of 22.0% in 1996. Some of these gains were due to the influx of baby boomers into this group.

At the same time, more workers than ever before are nearing retirement. In 2005, an estimated 3.6 million workers were within 10 years of (or older than) the median retirement age of 61. They represented 22.1% of the total, up from 10.3% in 1986.

Oil-rich Alberta has consistently enjoyed the highest employment rates in Canada during the past three decades. The province's employment rate fell slightly in 2005, from the record high attained in 2004, to 69.8%. Still, it remained among the highest experienced by the province in nearly three decades. These high employment rates reflect the upward trend in job growth that began in the early 1990s.

For more information, see the June 1, 2006 issue of *The Daily* on the Statistics Canada's Web site ([www.statcan.ca](http://www.statcan.ca)).

### ■ *Census family income*

For the second year in a row, couple families in Oshawa had the highest median total family income among all census metropolitan areas.

The median for couple families in Oshawa reached \$83,100 in 2004, up 1.6% over 2003, after adjusting for inflation. Oshawa remained slightly ahead of Ottawa–Gatineau, where couple families had a median total income of \$82,100, up 1.2% from the previous year.

Nationally, the median total income for couple families rose 1.6% to \$64,800 in 2004. Among census metropolitan areas, the largest increases were observed in Greater Sudbury (+3.7%) and Abbotsford (+2.9%), followed by Edmonton (+2.8%) and Calgary (+2.5%).

Among census agglomerations, the median total income for couple families in Wood Buffalo in northern Alberta remained the highest at \$120,100 in 2004, up 2.6% from 2003. Dominated by the population living in Fort McMurray, this area is recognized for its involvement in oil sands development.

Among lone-parent families in census metropolitan areas, those in Ottawa–Gatineau again showed the highest median family total income in 2004, at \$35,900. The median total income of lone-parent families in Calgary moved ahead of those in Oshawa in 2004, although both followed closely behind Ottawa–Gatineau, at \$35,800 and \$35,700 respectively. The national median total income for lone-parent families was \$29,500, up 1.2% from 2003.

Employment income remained the main source of income for couple families in 2004, accounting for 79 cents of each dollar of total income, a contribution that has remained stable since 2000.

For more information, see the May 25, 2006 issue of *The Daily* on the Statistics Canada's Web site ([www.statcan.ca](http://www.statcan.ca)).

### ■ *Income of individuals*

Median total income for individuals increased for the first time in three years in 2004. The median total income of individuals amounted to \$24,400, up 1.5% from 2003.

Median employment income edged up 0.5% to \$25,400. Only people with employment income were included in the calculation of median employment income.

The Northwest Territories still had the highest median employment income in the country at \$35,400, up 3.7% from 2003 and by far the largest gain among all provinces and territories.

Yukon followed with median employment income of \$28,300 (+1.4%). Ontario was in third place at \$27,900 (-0.1%) followed by Alberta with \$27,500 (+2.2%). Median employment income in Newfoundland and Labrador was the lowest at \$17,000, although it rose 3.0% in 2004, a rate of increase second only to the Northwest Territories.

As in previous years, employment income represented 75% of total income. Government transfers represented the second largest source of income, accounting for 12% of total income at the national level. The main components of transfers were Old Age Security and Canada/Quebec Pension Plan benefits.

At the national level, taxfilers received \$15.68 in government transfers for every \$100 of employment income in 2004, down from \$15.97 in 2003. Among census metropolitan areas, people in Calgary relied least

on transfer payments, receiving only \$7.46 for every \$100 in employment income. Those in Trois-Rivières received the most (\$23.98).

For more information, see the May 23, 2006 issue of *The Daily* on the Statistics Canada's Web site ([www.statcan.ca](http://www.statcan.ca)).

## ■ FROM OTHER ORGANIZATIONS

### ■ *Working time over the 20th century*

From 1870 to 2000, the workweek decreased by 41% in industrialized countries. The employment rate displays large movements but no clear secular pattern. What accounts for the large decrease in the workweek and developments in the employment rate over the past 130 years? A dynamic general-equilibrium model with supervisory and production workers provides the answer. Over time, both types of workers become more productive. In a calibrated version of the model, productivity gains of supervisors account for a large fraction of the decline in the workweek length in Japan, the United Kingdom, and the United States. The model, augmented to include taxes, government spending, and technological progress, captures the movement in the employment rates of the three countries. See “*Working time over the 20th century*” by Alexander Ueberfeldt, working paper 2006-18, Bank of Canada, May 2006.

### ■ *Accessibility and employment growth*

Various accessibility measures have been proposed over the past 40 years and applied to a wide range of problems. This paper provides a new functional form to represent accessibility using transportation data from the New York/New Jersey metropolitan area. The accessibility function is used as an input to an employment function of several socioeconomic variables. Two main hypotheses are tested: (1) improved accessibility, all other factors remaining the same, will positively affect labour market entry; and (2) this effect will vary by employment type and industry. Both functions are estimated simultaneously with county-level data for the year 2000 using two-stage and three-stage least squares analysis (2SLS and 3SLS). Because the 3SLS results were statistically more robust, while the parameter estimates remained similar in magnitude and sign, the proposed model mainly used these estimates. Main results show that the changes in accessibility have

a noticeable effect on employment. Depending on skill requirements, offered wage rates, household income, and children of specific age groups, participation in the employment sectors considered were proved to be responsive to accessibility improvements. See “Modeling and analysis of the link between accessibility and employment growth” by K. Ozbay, D. Ozmen and J. Berechman, *Journal of Transportation Engineering*, May 2006, Vol. 132, no. 5, p. 385-393.

### ■ *Community unemployment and immigrants' health in Montréal*

This study compares the relationship between community unemployment and the physical and mental health for immigrants and non-immigrants in Montréal under the hypothesis that high unemployment in the community may generate more negative effects on the health of immigrants than on non-immigrants. Montréal residents were studied via multilevel analysis, using both individual survey data and neighbourhood data from 49 police districts. Individual-level data were excerpted from a 1998 health survey of Montréal residents, while neighbourhood data originated from survey data collected in the 49 Montréal police districts and the 1996 Census. The associations between community unemployment and self-rated health, psychological distress and obesity are examined. At the individual level, immigrants do not differ from non-immigrants with respect to the three health indicators, except that second-generation males are slightly heavier. However, when living in areas of high unemployment, immigrants tend to report poor physical and mental health in comparison to non-immigrants. Among first-generation immigrants, community unemployment was associated with psychological distress. Among second-generation immigrants, the probability of obesity and poor self-rated health increased significantly for those living in areas with high unemployment, but these associations reached statistical significance only for men. See “Community unemployment and immigrants' health in Montreal” by Maria-Victoria Zunzunegui, Mathieu Forster, Lise Gauvin, Marie-France Raynault and Willms J. Douglas, *Social Science & Medicine*, July 2006, Vol. 63, no. 2, p. 485-500.

### ■ *Internal labour markets and labour market restructuring*

Since the 1980s, social scientists and economic geographers have stressed that ‘standard’ forms of employment and internal labour markets (ILMs) which



characterized Fordism have declined and have been displaced by post-Fordist non-standard and contingent employment arrangements. However, some researchers are critical of the assumptions of a universal decline in ILMs and stress that although ILMs have been significantly restructured, they remain an important part of firm employment strategies. On the basis of a postal survey and interviews conducted with ninety firms and institutions in Kitchener-Waterloo and Sault Ste. Marie, Ontario, in 1995 and 1996, this paper assesses the role of ILMs. Although shifts towards non-standard arrangements are evident, employers are clearly aware of the need to maintain if not develop ILM structures. The paper argues that geographers need to reconceptualize the relationships between ILMs and external labour markets (ELMs) as integrated phenomena. See "Requiem or rebirth? Internal labour markets and labour market restructuring in the Kitchener and Sault Ste. Marie regions" by Tod D. Rutherford, *Canadian Geographer*, June 2006, Vol. 50, no. 2, p. 197-216.

### ■ *Attitudes to work and career progression (in French)*

Based on a sample of federal public servants, this article examines the relationships between the key psychological and attitudinal indicators in the workplace (indicators that are often used to predict employee propensity to quit and the career steps of these same employees. When the career steps are established on the basis of actual career concerns, respondents who are either in the exploration or disengagement phase have generally more negative attitudes towards work than those who are in the middle of establishing or maintaining their careers. The findings raise important issues with respect to human resources management in the public sector, and suggest practical avenues for action aimed at ensuring greater employee mobilization and retention. See « Quand les attitudes au travail sont tributaires de la progression de carrière : analyse dans le cadre de la modernisation de la gestion des ressources humaines » by Renaud Paquet and Eric Gosselin, *Canadian Public Administration*, Summer 2006, Vol. 49, no. 2, p. 125-142.

### ■ *The ins and outs of poverty in advanced economies*

Comparative analysis of poverty dynamics—transitions and persistence—can yield important insights about the nature of poverty and the effectiveness of

alternative policy responses. This study compares poverty dynamics in Canada, Germany, Great Britain, and the United States for overlapping six-year periods in the 1990s, focusing on the impact of government policies. Relative to measured cross-sectional poverty rates, poverty persistence is higher in North America than in Europe. Most poverty transitions, and the prevalence of chronic poverty, are associated with employment instability and family dissolution in all four countries. However, government tax-and-transfer policies are more effective at reducing poverty persistence in Europe than in North America. See "The ins and outs of poverty in advanced economies: Government policy and poverty dynamics in Canada, Germany, Great Britain, and the United States" by Robert G. Valletta, *Review of Income & Wealth*, June 2006, Vol. 52, no. 2, p. 261-284.

### ■ *Involuntary unemployment and macroeconomic policy*

The perspective of modern macroeconomic theory, be it new classical or old and new Keynesian, is that unemployment can be reduced only if real wages are cut. The modern Keynesians, using the micro-foundations of efficiency wage theory, argue that real wages cannot and will not be cut by firms for efficiency wage reasons. This generates involuntary unemployment based on a market coordination problem. This paper presents a behavioural model that contrasts with efficiency wage theory, which suggests that reducing real wages need not affect the marginal cost of labour and, therefore, the number of individuals employed. In the behavioural model, wherein some linearity exists in the relationship between real wages and working conditions and labour productivity, a lower real wage rate is not a necessary condition for reducing the unemployment rate nor is a higher real wage an obstacle to reducing it. In this scenario, unemployment, to the extent that it is demand-side induced, is not related to movements in real wages. Therefore, restoring full employment after a negative demand shock becomes a matter for demand management. See "Involuntary unemployment, macroeconomic policy, and a behavioral model of the firm: Why high real wages need not cause high unemployment" by Morris Altman, *Research in Economics*, June 2006, Vol. 60, no. 2, p. 97-111.



### ■ **General/specific skills in the labour market**

Human capital investments are not independent of the aggregate state of labour markets: frictions and slackness of the labour market raise the returns to specific human capital investments relative to general investments. This paper presents a macroeconomic model with two pure strategy regimes. In the pure G-regime, workers invest in general skills. This occurs when they face high turnover labour markets and an absence of employment protection. The pure S-regime in which workers invest in skills specific to their job appears when employment protection is high enough. Implications for a characterization of Europe-United States differences are provided in conclusion. See "General versus specific skills in labor markets with search frictions and firing costs" by Etienne Wasmer, *The American Economic Review*, 06/01/2006, Vol. 96, no. 3, p. 811-

### ■ **Wage differentials, discrimination and efficiency**

This paper analyzes a large labour market where homogeneous firms post wages to direct the search of workers who differ in productivity. The model is shown to have a unique equilibrium. The wage differential depends positively on the workers' productivity differential only when the latter is large. When the productivity differential is small, high-productivity workers get a lower wage than low-productivity workers. This reverse wage differential remains even when the productivity differential shrinks to zero. However, the equilibrium is socially efficient. High-productivity workers always get the employment priority and higher expected wages than low-productivity workers. Although discrimination in terms of expected wages does not exist, conventional measures are likely to incorrectly find discrimination in the model. See "Wage differentials, discrimination and efficiency" by Shi Shouyong, *European Economic Review*, May 2006, Vol. 50, no. 4, p. 849-875.

### ■ **Directed search on the job and the wage ladder**

This study presents a model of a labour market where employed workers search on the job and firms direct workers' search using wage offers and employment probabilities. Applicants observe all offers and face a trade-off between wage and employment probability. Wage dispersion is seen among workers, even though all workers and jobs are homogeneous. Equilibrium wages form a ladder, as workers optimally choose to climb the ladder one rung at a time. This is because low-wage applicants are relatively more sensitive to employment probability than to wage and thus forgo the opportunity to apply for a high wage, with a lower chance of success. See "Directed search on the job and the wage ladder" by Alain Delacroix and Shouyong Shi, *International Economic Review*, May 2006, Vol. 47, no. 2, p. 651-699.

### ■ **Globalization and wage inequality**

The deteriorating economic position of low-skilled workers relative to high-skilled workers appears to be one harmful effect of the economic globalization that took place during the 1980s and 1990s. This paper presents a time series investigation for Canada using as the dependent variable the relative wages of production and non-production workers in the manufacturing sector between 1970 and 2001. The independent variables include R&D, union density, immigration, imports from non-OECD countries, foreign direct investment (FDI), capital-labour ratio, and number of workers in each group. The results show that the R&D expenditures and union density are two important variables in the explanation of the widening wage gap. The effects of immigration, imports, and FDI on wage inequality are found to be moderate. See "Globalization and wage inequality in the Canadian manufacturing sector: A time series analysis" by Gilles Grenier and Akbar Tavakoli, *Global Economy Journal*, 2006, Vol. 6, no. 2, p. 1-25.

# Varia

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## CONTACTS

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# Unionization

## Unionization rates in first half of 2005 and 2006

At 13.8 million, average paid employment (employees) during the first half of 2006 was 312,000 higher than during the same period a year earlier (Table 1). On the other hand, union membership increased by only 62,000 to 4.1 million. As a result, the unionization rate (density) fell from 30.0% to 29.7%.

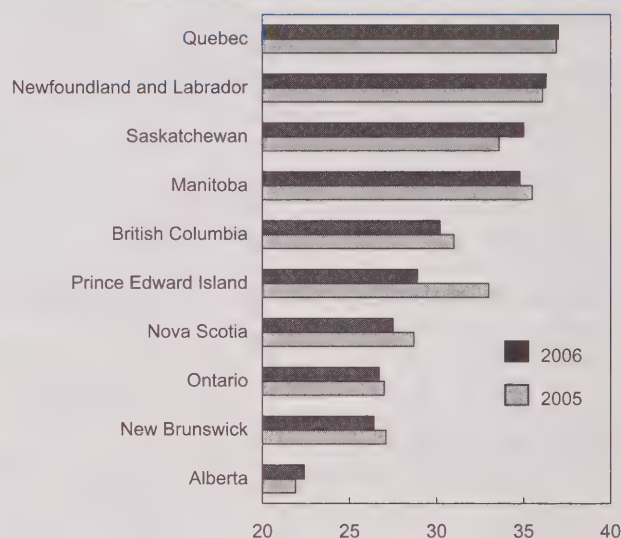
Both men and women registered decreases in unionization rates, with the decline for men being larger. At 30.1%, the women's rate in 2006 continued to exceed the rate for men (29.4%).

Unionization rose slightly in the public sector (to 71.4%) and fell in the private sector (to 17.0%).

Newfoundland and Labrador, Quebec, Saskatchewan and Alberta recorded rate increases, with the other six provinces showing declines (Chart A).

The rate fell from 31.5% to 31.2% for full-time workers and remained virtually unchanged for part-time workers (23.2%).

**Chart A** Quebec, Newfoundland and Labrador remain the most unionized provinces; Alberta, the least



Source: Statistics Canada, Labour Force Survey, January-to-June averages

## Data sources

Information on union membership, density and coverage by various socio-demographic characteristics, including earnings, are from the Labour Force Survey. Further details can be obtained from Marc Lévesque, Labour Statistics Division, Statistics Canada at (613) 951-4090.

Data on strikes, lockouts and workdays lost, and those on major wage settlements were supplied by Human Resources and Skills Development Canada (HRSDC). Further information on these statistics may be obtained from Client services, Workplace Information Directorate, HRSDC at 1 800 567-6866.

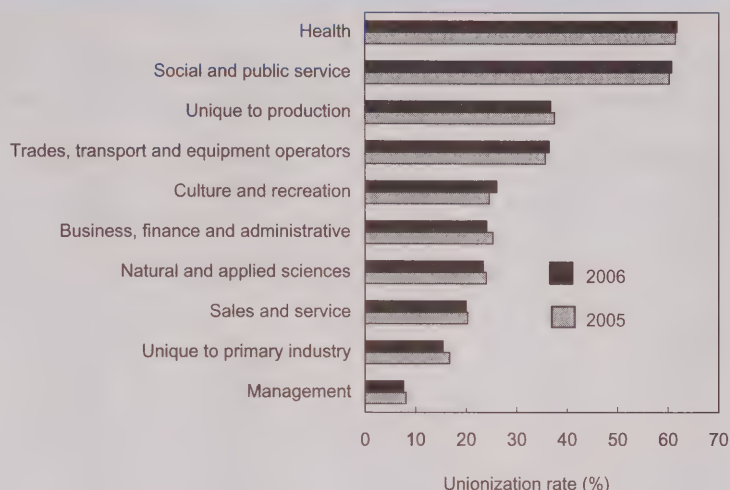


The unionization rate for permanent employees fell to 30.2%, but rose to 26.3% for those in non-permanent jobs. The rate fell in workplaces with 20 to 99 employees, and in those with over 500; it remained unchanged in those with 100 to 500 employees, but rose in those with less than 20.

Unionization rose in 7 of the 16 major industry groups: natural resources, utilities, construction, transportation and warehousing, education, health care and social assistance, and other services. All other industry groups registered declines (Chart B).

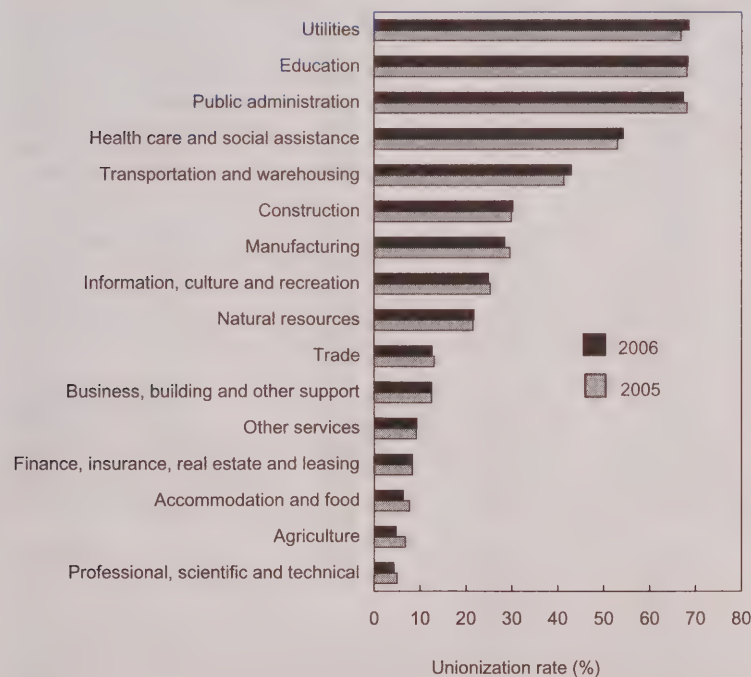
Among the 10 major occupational groups, unionization rose in 4: health, social and public service; culture and recreation; and trades, transport and equipment operation. The rest showed declines (Chart C).

**Chart C Unionization in community service occupations far outpaced that in others**



Source: Statistics Canada, Labour Force Survey, January-to-June averages

**Chart B The highest unionization rates were in public-sector industries**



Source: Statistics Canada, Labour Force Survey, January-to-June averages

The number of employees who were not union members but covered by a collective agreement averaged 316,000, up slightly from 306,000 a year earlier (see Akyeampong 2000 for a description of this group).

Table 1 Union membership and coverage by selected characteristics

	2005			2006		
	Total employees	Union density		Total employees	Union density	
		Members	Coverage <sup>1</sup>		Members	Coverage <sup>1</sup>
	'000	%	%	'000	%	%
<b>Both sexes</b>	<b>13,492</b>	<b>30.0</b>	<b>32.2</b>	<b>13,804</b>	<b>29.7</b>	<b>32.0</b>
Men	6,828	29.7	32.1	6,979	29.4	31.9
Women	6,664	30.2	32.3	6,825	30.1	32.1
<b>Sector<sup>2</sup></b>						
Public	3,131	71.3	75.2	3,229	71.4	75.1
Private	10,361	17.5	19.2	10,575	17.0	18.9
<b>Age</b>						
15 to 24	2,287	14.1	15.8	2,369	13.3	15.5
25 to 54	9,655	32.9	35.3	9,798	32.7	35.1
25 to 44	6,530	29.7	31.9	6,559	29.5	31.9
45 to 54	3,125	39.7	42.3	3,238	39.3	41.6
55 and over	1,550	35.2	37.6	1,638	35.5	37.7
<b>Education</b>						
Less than Grade 9	345	26.4	28.1	333	27.6	30.1
Some high school	1,441	22.5	23.9	1,497	21.9	23.5
High school graduation	2,831	26.8	28.7	2,848	27.1	28.8
Some postsecondary	1,255	22.3	24.1	1,214	21.6	23.7
Postsecondary certificate or diploma	4,714	33.7	36.1	4,799	33.4	35.9
University degree	2,906	34.5	37.5	3,113	33.7	36.7
<b>Province</b>						
Atlantic	915	29.9	31.4	931	28.9	30.5
Newfoundland and Labrador	182	36.1	37.8	180	36.3	38.1
Prince Edward Island	56	33.0	34.6	56	28.9	30.2
Nova Scotia	377	28.7	30.3	384	27.5	28.9
New Brunswick	301	27.1	28.4	311	26.4	28.1
Quebec	3,161	36.9	40.4	3,219	37.0	40.9
Ontario	5,420	27.0	29.0	5,494	26.7	28.4
Prairies	2,303	26.7	28.7	2,394	27.0	29.1
Manitoba	488	35.5	37.8	496	34.8	37.5
Saskatchewan	386	33.6	35.1	387	35.0	36.9
Alberta	1,429	21.9	23.8	1,510	22.4	24.4
British Columbia	1,693	31.0	32.7	1,766	30.2	32.0
<b>Work status</b>						
Full-time	10,999	31.5	33.8	11,275	31.2	33.6
Part-time	2,493	23.3	25.1	2,528	23.2	25.2
<b>Industry</b>						
Goods-producing	3,251	29.6	32.0	3,214	28.8	31.0
Agriculture	119	6.8	7.5	129	4.8	5.4
Natural resources	248	21.5	23.2	261	21.7	23.7
Utilities	125	66.8	69.2	119	68.5	72.5
Construction	642	29.9	32.0	685	30.2	32.2
Manufacturing	2,117	29.6	32.2	2,020	28.4	30.7
Service-producing	10,241	30.1	32.3	10,590	30.0	32.3
Trade	2,232	13.1	14.2	2,313	12.6	14.2
Transportation and warehousing	645	41.3	42.8	661	42.9	44.4
Finance, insurance, real estate and leasing	826	8.3	9.6	853	8.3	10.3
Professional, scientific and technical	679	5.0	6.8	717	4.3	5.4
Business, building and other support	481	12.5	14.4	517	12.5	14.8
Education	1,073	68.1	72.6	1,145	68.3	72.7
Health care and social assistance	1,507	53.0	55.5	1,546	54.2	56.5
Information, culture and recreation	600	25.3	27.6	626	24.9	26.9
Accommodation and food	898	7.7	8.5	895	6.3	7.4
Other	470	9.2	11.3	485	9.3	11.1
Public administration	830	68.1	73.5	833	67.3	72.5

**Table 1 Union membership and coverage by selected characteristics (concluded)**

	2005			2006		
	Total employees	Union density		Total employees	Union density	
		Members	Coverage <sup>1</sup>		Members	Coverage <sup>1</sup>
<b>Occupation</b>	'000	%	%	'000	%	%
Management	914	8.1	11.2	1,013	7.6	10.4
Business, finance and administrative	2,638	25.3	27.5	2,698	24.1	26.3
Professional	337	18.1	21.5	352	14.6	17.3
Financial and administrative	728	22.9	25.0	700	22.5	24.5
Clerical	1,574	28.0	30.0	1,645	26.7	28.9
Natural and applied sciences	953	24.0	26.1	981	23.4	26.1
Health	824	61.4	63.8	854	61.7	64.1
Professional	88	40.5	47.5	94	35.6	41.3
Nursing	265	78.0	80.2	264	81.4	83.2
Technical	199	59.0	61.1	211	59.3	60.9
Support staff	272	53.6	54.9	285	53.8	56.4
Social and public service	1,077	60.2	64.3	1,142	60.7	64.2
Legal, social and religious workers	432	37.3	41.3	452	38.2	40.9
Teachers and professors	645	75.5	79.8	690	75.4	79.5
Secondary and elementary	443	85.9	88.8	472	87.1	89.8
Other	202	52.8	59.9	219	50.2	57.2
Culture and recreation	316	24.6	27.3	331	26.1	28.4
Sales and service	3,454	20.3	21.9	3,444	20.0	21.7
Wholesale	353	7.2	7.9	359	6.1	7.4
Retail	1,034	12.8	13.9	1,013	11.8	12.9
Food and beverage	487	10.6	11.7	497	9.2	9.9
Protective services	218	56.4	62.6	215	54.6	60.7
Child care and home support	258	37.1	39.1	277	39.5	42.3
Travel and accommodation	1,205	24.5	26.2	1,195	25.5	27.3
Trades, transport and equipment operators	1,915	35.7	37.9	1,987	36.5	38.6
Contractors and supervisors	117	28.4	31.1	114	27.1	29.6
Construction trades	232	37.3	40.1	254	37.9	40.1
Other trades	788	37.7	40.0	781	38.4	40.4
Transportation equipment operators	470	35.1	36.7	504	38.1	39.9
Helpers and labourers	310	33.2	35.2	334	31.8	34.5
Unique to primary industry	262	16.7	17.7	273	15.4	17.0
Unique to production	1,036	37.5	39.8	969	36.8	39.4
Machine operators and assemblers	832	37.3	39.5	772	36.5	39.0
Labourers	204	38.3	40.6	198	38.0	41.1
<b>Workplace size</b>						
Under 20 employees	4,396	12.9	14.5	4,473	13.4	15.0
20 to 99 employees	4,433	30.2	32.6	4,548	29.7	32.2
100 to 500 employees	2,873	41.4	44.0	2,946	41.4	44.0
Over 500 employees	1,790	53.1	56.1	1,837	50.9	53.8
<b>Job tenure</b>						
1 to 12 months	3,037	14.8	17.1	3,147	14.6	17.2
Over 1 year to 5 years	4,349	23.3	25.5	4,361	23.0	25.2
Over 5 years to 9 years	2,002	30.9	32.9	2,194	32.1	34.1
Over 9 years to 14 years	1,244	36.5	38.3	1,278	36.7	38.7
Over 14 years	2,860	52.7	55.3	2,823	52.0	54.5
<b>Job status</b>						
Permanent	11,790	30.6	32.8	12,069	30.2	32.4
Non-permanent	1,702	25.4	28.2	1,735	26.3	29.4

1 Union members and persons who are not union members but covered by collective agreements (for example, some religious group members).

2 Public-sector employees are those working for government departments or agencies; Crown corporations; or publicly funded schools, hospitals or other institutions. Private-sector employees are all other wage and salary earners.

Source: Statistics Canada, Labour Force Survey, January-to-June averages



## 2005 annual averages

Approximately 4.1 million (29.8%) employees belonged to a union in 2005 (Table 2). An additional 310,000 (2.2%) were covered by a collective agreement.

Those in the public sector—government, Crown corporations, and publicly funded schools or hospitals—were four times as likely as their private-sector counterparts to belong to a union (71.0% versus 17.5%).

Almost 1 in 3 full-time employees belonged to a union, compared with about 1 in 4 part-time. Also, almost 1 in 3 permanent employees was a union member, compared with 1 in 4 non-permanent.

High unionization rates were found among employees aged 45 to 54 (39.4%); among those with a university degree (34.2%), or a postsecondary certificate or diploma (33.6%); in Quebec (36.7%), and Newfoundland and Labrador (35.7%); in public administration (67.7%), educational services (67.6%), and utilities (66.8%); and in health care occupations (53.6%).

Low unionization rates were recorded among 15 to 24 year-olds (13.8%); in Alberta (21.6%); in agriculture (5.0%) and professional, scientific and technical services (5.3%); and in management occupations (8.5%).

### Table 2 Union membership, 2005

	Total employees	Union member	
		Total	Density
	'000	'000	%
<b>Both sexes</b>	<b>13,658</b>	<b>4,064</b>	<b>29.8</b>
Men	6,949	2,060	29.7
Women	6,709	2,004	29.9
<b>Sector<sup>1</sup></b>			
Public	3,123	2,218	71.0
Private	10,535	1,846	17.5
<b>Age</b>			
15 to 24	2,373	327	13.8
25 to 54	9,708	3,180	32.8
25 to 44	6,557	1,939	29.6
45 to 54	3,152	1,242	39.4
55 and over	1,576	557	35.4
<b>Education</b>			
Less than Grade 9	353	92	26.0
Some high school	1,476	327	22.2
High school graduation	2,869	759	26.5
Some postsecondary	1,233	274	22.2
Postsecondary certificate or diploma	4,752	1,596	33.6
University degree	2,975	1,016	34.2
<b>Province</b>			
Atlantic	937	274	29.3
Newfoundland and Labrador	187	67	35.7
Prince Edward Island	58	18	30.6
Nova Scotia	383	107	28.0
New Brunswick	309	82	26.6
Quebec	3,214	1,179	36.7
Ontario	5,470	1,470	26.9
Prairies	2,323	613	26.4
Manitoba	491	169	34.5
Saskatchewan	385	131	34.0
Alberta	1,447	313	21.6
British Columbia	1,715	528	30.8
<b>Work status</b>			
Full-time	11,225	3,503	31.2
Part-time	2,434	561	23.1
<b>Industry</b>			
Goods-producing	3,316	980	29.5
Agriculture	127	6	5.0
Natural resources	256	58	22.6
Utilities	125	83	66.8
Construction	699	212	30.3
Manufacturing	2,110	620	29.4
Service-producing	10,342	3,085	29.8
Trade	2,262	290	12.8
Transportation and warehousing	662	272	41.0
Finance, insurance, real estate and leasing	822	65	7.9
Professional, scientific and technical	683	36	5.3
Business, building and other support	504	63	12.6
Education	1,051	710	67.6
Health care and social assistance	1,521	815	53.6
Information, culture and recreation	619	156	25.3
Accommodation and food	912	70	7.7
Other	474	43	9.1
Public administration	833	564	67.7

### Differences between the sexes

For the second year in a row, the unionization rate for women in 2005 surpassed that of men (29.9% versus 29.7%).

Among men, part-time employees had a much lower rate than full-time (18.3% versus 31.0%). Among women, the gap was narrower (25.1% versus 31.5%).

The unionization rate of women in the public sector (72.5%) exceeded that of men (68.7%), reflecting women's presence in public administration, and in teaching and health positions. However, in the private sector, only 12.8% were unionized, compared with 21.4% of men. The lower rate among women reflected their predominance in sales and several service occupations.

A higher-than-average rate was recorded among men with a post-secondary certificate or diploma (33.7%). For women, the highest rate was among those with a university degree (39.7%), reflecting unionization in occupations such as health care and teaching.

Among those in permanent positions, the rate for men was identical to that for women (30.6%). Among those in non-permanent positions, women were more unionized than men (25.6% versus 23.0%).

**Table 2 Union membership, 2005 (concluded)**

	Total employees '000	Union member	
		Total '000	Density %
<b>Occupation</b>			
Management	947	81	8.5
Business, finance and administrative	2,649	656	24.8
Professional	349	61	17.6
Financial and administrative	709	160	22.6
Clerical	1,592	434	27.3
Natural and applied sciences	959	230	24.0
Health	841	515	61.2
Professional	92	36	39.0
Nursing	268	212	78.9
Technical	204	119	58.4
Support staff	277	148	53.6
Social and public service	1,081	644	59.6
Legal, social and religious workers	446	169	37.9
Teachers and professors	636	475	74.7
Secondary and elementary	432	369	85.4
Other	204	107	52.2
Culture and recreation	323	85	26.3
Sales and service	3,453	687	19.9
Wholesale	362	23	6.3
Retail	1,021	123	12.0
Food and beverage	501	54	10.8
Protective services	221	123	55.6
Child care and home support	248	93	37.6
Travel and accommodation	1,202	299	24.8
Trades, transport and equipment operators	1,983	710	35.8
Contractors and supervisors	114	32	28.4
Construction trades	257	94	36.7
Other trades	794	302	38.0
Transportation equipment operators	489	174	35.6
Helpers and labourers	328	107	32.7
Unique to primary industries	283	46	16.1
Unique to production	1,037	384	37.0
Machine operators and assemblers	828	307	37.1
Labourers	209	77	36.9
<b>Workplace size</b>			
Under 20 employees	4,455	582	13.1
20 to 99 employees	4,490	1,338	29.8
100 to 500 employees	2,915	1,194	40.9
Over 500 employees	1,799	952	52.9
<b>Job tenure</b>			
1 to 12 months	3,135	464	14.8
Over 1 year to 5 years	4,374	1,017	23.3
Over 5 years to 9 years	2,051	642	31.3
Over 9 years to 14 years	1,251	452	36.1
Over 14 years	2,847	1,490	52.3
<b>Job status</b>			
Permanent	11,861	3,626	30.6
Non-permanent	1,798	438	24.4

1 Public-sector employees are those working for government departments or agencies; Crown corporations; or publicly funded schools, hospitals or other institutions. Private-sector employees are all other wage and salary earners.

Source: Statistics Canada, Labour Force Survey

## Average earnings and usual hours

Unionized jobs generally provide higher earnings than non-unionized ones (Table 3). However, factors other than collective bargaining provisions play a role as well. These include varying distributions of unionized employees by age, sex, job tenure, industry, occupation, firm size, and geographical location.

Although these factors have not been examined, it is clear that unionized workers and jobs tend to have certain characteristics that are associated with higher earnings. For example, union density is higher among older workers, those with higher education, those with long tenure, and those in larger workplaces. Although differences in earnings and non-wage benefits cannot be attributed solely to union status (Akyeampong 2002), the union wage premium (after adjusting for employee and workplace characteristics) has been estimated at 7.7% (Fang and Verma 2002).

In 2005, the average hourly earnings of unionized workers were higher than those of non-unionized workers. This held true for both full-time (\$22.66 versus \$19.13) and part-time (\$19.10 versus \$11.62) employees.

In addition to having higher hourly earnings, unionized part-time employees generally worked more hours per

**Table 3 Average earnings and usual hours by union and job status, 2005**

	Hourly earnings			Usual weekly hours, main job		
	All employees	Full-time	Part-time	All employees	Full-time	Part-time
\$						
<b>Both sexes</b>	<b>19.09</b>	<b>20.31</b>	<b>13.45</b>	<b>35.6</b>	<b>39.6</b>	<b>17.5</b>
Union member	22.17	22.66	19.10	36.0	38.7	19.3
Unon coverage <sup>1</sup>	22.15	22.66	18.95	36.0	38.8	19.2
Not a union member <sup>2</sup>	17.65	19.13	11.62	35.4	40.0	16.9
<b>Men</b>	<b>20.74</b>	<b>21.71</b>	<b>12.45</b>	<b>38.3</b>	<b>40.8</b>	<b>16.5</b>
Union member	22.98	23.35	17.52	38.4	39.8	18.3
Unon coverage <sup>1</sup>	22.96	23.35	17.36	38.5	39.9	18.1
Not a union member <sup>2</sup>	19.69	20.88	11.19	38.2	41.3	16.1
<b>Women</b>	<b>17.38</b>	<b>18.58</b>	<b>13.87</b>	<b>32.9</b>	<b>38.0</b>	<b>17.9</b>
Union member	21.33	21.81	19.59	33.5	37.3	19.7
Unon coverage <sup>1</sup>	21.30	21.81	19.45	33.5	37.3	19.6
Not a union member <sup>2</sup>	15.54	16.94	11.81	32.6	38.3	17.3
<b>Atlantic</b>	<b>15.94</b>	<b>16.84</b>	<b>11.35</b>	<b>36.7</b>	<b>40.5</b>	<b>17.4</b>
Union member	20.59	20.80	18.69	37.5	39.4	19.8
Unon coverage <sup>1</sup>	20.58	20.81	18.61	37.4	39.5	19.6
Not a union member <sup>2</sup>	13.88	14.89	9.61	36.3	40.9	16.9
<b>Quebec</b>	<b>18.43</b>	<b>19.48</b>	<b>13.69</b>	<b>34.7</b>	<b>38.3</b>	<b>18.1</b>
Union member	20.89	21.16	19.16	35.4	37.7	20.2
Unon coverage <sup>1</sup>	20.74	21.05	18.73	35.4	37.8	20.1
Not a union member <sup>2</sup>	16.88	18.31	11.56	34.2	38.7	17.2
<b>Ontario</b>	<b>20.06</b>	<b>21.50</b>	<b>13.26</b>	<b>35.8</b>	<b>39.7</b>	<b>17.2</b>
Union member	23.39	24.12	18.74	36.3	39.0	18.6
Unon coverage <sup>1</sup>	23.43	24.18	18.67	36.3	39.1	18.5
Not a union member <sup>2</sup>	18.69	20.35	11.70	35.6	40.0	16.8
<b>Prairies</b>	<b>18.80</b>	<b>19.97</b>	<b>13.31</b>	<b>36.5</b>	<b>40.6</b>	<b>17.3</b>
Union member	21.67	22.25	18.45	36.3	39.4	19.4
Unon coverage <sup>1</sup>	21.76	22.32	18.67	36.4	39.5	19.3
Not a union member <sup>2</sup>	17.62	19.00	11.58	36.5	41.0	16.7
<b>British Columbia</b>	<b>19.36</b>	<b>20.48</b>	<b>14.71</b>	<b>35.2</b>	<b>39.4</b>	<b>17.5</b>
Union member	22.99	23.46	20.64	35.6	38.8	19.1
Unon coverage <sup>1</sup>	23.04	23.56	20.41	35.6	38.9	19.1
Not a union member <sup>2</sup>	17.58	18.91	12.53	35.0	39.7	17.0

1 Union members and persons who are not union members but covered by collective agreements (for example, some religious group members).

2 Workers who are neither union members nor covered by collective agreements.

Source: Statistics Canada, Labour Force Survey

week than their non-unionized counterparts (19.3 hours versus 16.9). As a result, their average weekly earnings were nearly double (\$375.99 versus \$200.46).

On average, unionized women working full time received 93% as much in hourly earnings as their male counterparts. In contrast, women working part time earned 12% more.



## Wage settlements, inflation and labour disputes

Wage gains in 2005 (2.3%) almost matched the rate of inflation (2.2%), as was the case in the previous year (Table 4). During the first four months of 2006, wage gains averaged 2.4%, also virtually matching the rate of inflation (2.5%).

Wage gains in the public sector in 2005 (2.2%) fell slightly short of those in the private sector (2.4%). The corresponding figures in the first four months of 2006 were 2.4% and 2.6%.

Annual statistics on strikes, lockouts and person-days lost are affected by several factors, including collective bargaining timetables, size of the unions involved, strike or lockout duration, and state of the economy. The number of collective agreements up for renewal in a year determines the potential for industrial disputes. Union size and strike or lockout duration determine the number of person-days lost. The state of the economy influences the likelihood of an industrial dispute, given that one is legally possible.

The estimated number of person-days lost through strikes and lockouts almost doubled from 1.7 million in 2003 to roughly 3.2 million in 2004, and rose again to 4.1 million in 2005.

**Table 4 Major wage settlements, inflation and labour disputes**

Year	Average annual increase in base wage rates <sup>1</sup>			Annual change in consumer price index <sup>1</sup>	Labour disputes and time lost <sup>3</sup>			
	Public sector employees <sup>2</sup>	Private sector employees <sup>2</sup>	Total employees		Strikes and lockouts <sup>4</sup>	Workers involved	Person-days not worked	Proportion of estimated working time
			%			'000	'000	%
1980	10.9	11.7	11.1	10.1	1,028	452	9,130	0.37
1981	13.1	12.6	13.0	12.4	1,049	342	8,850	0.35
1982	10.4	9.5	10.2	10.9	679	464	5,702	0.23
1983	4.6	5.5	4.8	5.8	645	330	4,441	0.18
1984	3.9	3.2	3.6	4.3	716	187	3,883	0.15
1985	3.8	3.3	3.7	4.0	829	164	3,126	0.12
1986	3.6	3.0	3.4	4.1	748	486	7,151	0.27
1987	4.1	3.8	4.0	4.4	668	582	3,810	0.14
1988	4.0	5.0	4.4	4.0	548	207	4,901	0.17
1989	5.2	5.2	5.2	5.0	627	445	3,701	0.13
1990	5.6	5.7	5.6	4.8	579	271	5,079	0.17
1991	3.4	4.4	3.6	5.6	463	254	2,516	0.09
1992	2.0	2.6	2.1	1.5	404	152	2,110	0.07
1993	0.6	0.8	0.7	1.8	381	102	1,517	0.05
1994	...	1.2	0.3	0.2	374	81	1,607	0.06
1995	0.6	1.4	0.9	2.2	328	149	1,583	0.05
1996	0.5	1.7	0.9	1.6	330	276	3,269	0.11
1997	1.1	1.8	1.5	1.6	284	258	3,608	0.12
1998	1.6	1.8	1.7	0.9	381	244	2,444	0.08
1999	2.0	2.7	2.2	1.7	413	160	2,443	0.08
2000	2.5	2.4	2.5	2.7	379	144	1,657	0.05
2001	3.4	3.0	3.3	2.6	381	221	2,199	0.07
2002	2.9	2.6	2.8	2.2	294	168	3,033	0.09
2003	2.9	1.2	2.5	2.8	266	81	1,736	0.05
2004	1.4	2.2	1.8	1.9	298	260	3,225	0.09
2005	2.2	2.4	2.3	2.2	293	429	4,107	0.11
2006 <sup>5</sup>	2.4	2.6	2.4	2.5				

1 Involving 500 or more employees.

2 Public-sector employees are those working for government departments or agencies; Crown corporations; or publicly funded schools, hospitals or other institutions. Private-sector employees are all other wage and salary earners.

3 Involving 1 or more workers.

4 Ten person-days not worked.

5 2006 data refer to January to April only.

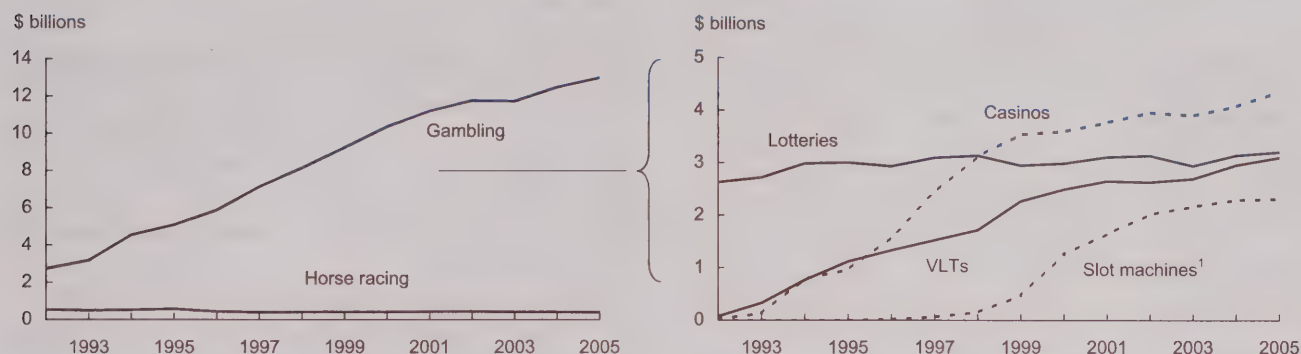
Sources: Statistics Canada, Prices Division; Human Resources and Skills Development Canada, Workplace Information Directorate

# Gambling

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- Net revenue from government-run lotteries, video lottery terminals (VLTs), and casinos rose from \$2.7 billion in 1992 to \$12.9 billion in 2005.<sup>1</sup> Of this \$12.9 billion, \$7.3 billion was profit.
- Net revenue from pari-mutuel betting (horse racing) dropped from \$532 million to \$399 million over the same period (1992 to 2005).
- In 2005, lotteries accounted for 25% of all net non-charity gambling revenue, casinos 34%, VLTs 24%, and slot machines not in casinos 18%.
- Average gambling revenue per person 18 and over in 2004 ranged from \$112 in the three territories to \$680 in Saskatchewan, with a national average of \$497.<sup>2</sup>
- Compared with workers in non-gambling industries, those in gambling were more likely to be women (54% versus 47%), under 35 (44% versus 37%), paid by the hour (80% versus 65%), and paid less (\$17 hourly versus \$19).
- Employment in the gambling industry rose from 11,000 in 1992 to 45,000 in 2005.
- One in seven women and men living alone reported spending money on casinos, slot machines or VLTs; however, the men spent more than four times as much as the women—\$1,390 compared with \$304.<sup>3</sup>
- Gambling participation and expenditure rates increased with household income. For example, 55% of households with incomes of less than \$20,000 gambled in 2004 and spent an average of \$283, while equivalent figures for those with incomes of \$80,000 or more were 79% and \$847.

## Net revenue from government-run gambling has increased steadily



1 Refers to ones found outside government-run casinos.

Source: Statistics Canada, National Accounts

## Gambling revenues and profits

	Gambling revenue <sup>1</sup>		Gambling profit <sup>2</sup>		Share of total revenue <sup>3</sup>		Revenue per capita (18+) <sup>4</sup>	
	1992	2004	1992	2004	1992	2004	1992	2004
	\$ millions (current)				%		\$	
<b>Canada</b>	<b>2,734</b>	<b>12,416</b>	<b>1,680</b>	<b>6,637</b>	<b>1.9</b>	<b>5.5</b>	<b>128</b>	<b>497</b>
Newfoundland and Labrador	80	218	42	112	2.3	5.5	189	527
Prince Edward Island	20	34	7	17	2.7	3.2	209	319
Nova Scotia	125	376	72	173	2.8	5.6	180	505
New Brunswick	117	218	49	122	2.7	3.7	209	364
Quebec	693	2,837	472	1,561	1.8	4.8	128	473
Ontario	853	4,644	529	1,908	1.9	6.2	106	483
Manitoba	153	485	105	254	2.5	5.0	186	547
Saskatchewan	62	510	39	309	1.1	6.5	86	680
Alberta	225	1,716	125	1,180	1.6	6.3	118	702
British Columbia	403	1,371	239	770	2.2	5.0	153	411
Yukon, Northwest Territories and Nunavut	5	8	1	4	0.3	0.3	82	112

1 Total revenue from wagers on government-controlled lotteries, casinos and VLTs, minus prizes and winnings.

2 Net income of provincial governments from total gambling revenue, less operating and other expenses (see *Data sources and definitions*).

3 The 2004 share of total revenue calculation is based on 2004 gambling revenue and 2003 total provincial revenue. The 2004 provincial revenue will be available autumn 2006.

4 Persons 18 and over were selected as this is the legal age of gambling in most provinces.

Sources: Statistics Canada, National Accounts, Public Institutions (Financial management statistics) and post-censal population estimates.



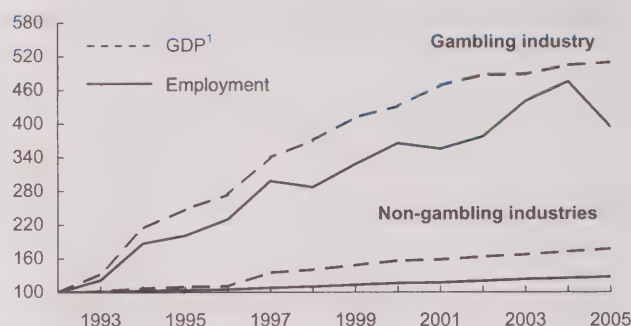
## Characteristics of workers

	Gambling		Non-gambling	
	1992	2005	1992	2005
<b>Total employed</b>	<b>11</b>	<b>45</b>	<b>12,720</b>	<b>16,125</b>
			'000	
<b>Sex</b>				
Men	35	46	55	53
Women	65	54	45	47
			%	
<b>Age</b>				
15 to 34	57	44	45	37
35 and over	43	56	55	63
<b>Education</b>				
High school or less	66	51	57	43
Postsecondary certificate or diploma	21	36	27	35
University degree	13	13	16	22
<b>Work status</b>				
Full-time	60	81	81	82
Part-time	40	19	19	18
<b>Provinces</b>				
Atlantic provinces	8	4	7	7
Quebec	F	16	24	23
Ontario	28	44	39	40
Prairie provinces	30	18	17	18
British Columbia	25	17	13	13
<b>Class of worker</b>				
Employee	99	100	85	84
Self-employed	F	F	15	15

Source: Statistics Canada, Labour Force Survey

## Gambling outpaced other industries

1992=100



1 The price, at basic prices, of the goods and services produced. The GDP figures for the gambling industry refer strictly to wagering activities, such as lottery ticket sales, VLT receipt sales, and bets at casinos. Other economic spinoffs, such as hotel and restaurant business, security services, or building and equipment maintenance are not included.

Sources: Statistics Canada, Labour Force Survey; National Accounts

## Characteristics of jobs

	Gambling		Non-gambling	
	1997	2005	1997	2005
<b>Employees<sup>1</sup></b>	<b>33</b>	<b>45</b>	<b>11,323</b>	<b>13,613</b>
			'000	
			%	
Unionized <sup>2</sup>	29	32	34	32
Non-unionized	71	68	66	68
Permanent job	91	91	89	87
Temporary job	9	9	11	13
Usually receive tips	27	32	7	7
No tips	73	68	93	93
Paid by the hour	80	80	61	65
Not paid hourly	20	20	39	35
<b>Average hourly earnings<sup>3</sup></b>				
			\$	
Men: full-time	13.51	20.17	17.83	21.71
Women: full-time	13.04	16.11	14.79	18.59

1 More detailed questions on employees were introduced with the 1997 revision of the Labour Force Survey.

2 Includes persons who are not union members, but whose jobs are covered by collective agreements.

3 Includes tips and commissions.

Source: Statistics Canada, Labour Force Survey

## Household expenditures on gambling activities

	At least one gambling activity		Government lotteries		Other lotteries/raffles, etc.		Casinos, slot machines and VLTs		Bingos	
	\$	%	\$	%	\$	%	\$	%	\$	%
<b>All households</b>										
1999	499	76	246	67	76	32	631	20	655	10
2000	492	74	245	64	84	31	546	21	743	9
2001	513	72	257	62	98	30	554	20	815	9
2002	570	73	263	63	129	30	679	21	905	8
2003	506	74	243	66	96	29	670	19	799	8
2004	514	71	265	61	101	28	664	19	805	6
<b>One-person households<sup>1</sup></b>	457	60	216	50	74	17	856	14	664	5
Men	648	61	277	53	96	15	1,390	16	503	2
18 to 44	538	58	164	47	92	14	1,180	19	134	1
45 to 64	840	68	331	63	80	18	2,262	15	616	2
65 and over	501	58	407	51	144	14	335	13	572	4
Women	296	59	160	47	59	18	304	13	698	7
18 to 44	137	54	91	39	52	23	181	13	113	2
45 to 64	271	66	160	58	66	18	277	14	515	7
65 and over	391	56	191	44	59	16	396	12	868	9
<b>All households</b>										
Newfoundland and Labrador	502	70	298	60	72	37	407	9	724	15
Prince Edward Island	484	69	283	55	86	44	156	9	1,068	12
Nova Scotia	509	72	255	59	92	43	496	17	901	10
New Brunswick	418	72	252	61	70	37	322	10	691	13
Quebec	405	75	251	70	50	15	486	16	654	7
Ontario	620	70	295	59	107	30	791	23	932	5
Manitoba	655	67	315	52	71	37	731	24	862	9
Saskatchewan	504	74	212	53	95	49	655	24	712	8
Alberta	524	70	229	56	159	36	670	16	1,195	6
British Columbia	420	68	239	59	110	30	581	17	408	3
<b>Income after tax</b>										
Less than \$20,000	283	55	192	46	57	12	223	9	586	7
\$20,000 to \$39,999	504	68	245	60	76	23	705	16	947	7
\$40,000 to \$59,999	420	75	252	65	94	30	437	20	658	5
\$60,000 to \$79,999	495	79	274	69	96	37	491	24	989	5
\$80,000 and over	847	79	362	67	148	43	1,130	29	797	4

1 Using one-person households allows examination of individual characteristics. Persons 18 and over were selected as this is the legal age for gambling in most provinces.

Note: Expenditures are per spending household. Unless otherwise indicated, figures are for 2004.

Source: Statistics Canada, Survey of Household Spending

## Data sources and definitions

**Labour Force Survey:** a monthly household survey that collects information on labour market activity, including detailed occupational and industrial classifications, from all persons 15 years and over.

**National Accounts:** The quarterly Income and Expenditure Accounts (IEA) is one of several programs constituting the System of National Accounts. The IEA produces detailed annual and quarterly income and expenditure accounts for all sectors of the Canadian economy, namely households, businesses, governments and non-residents.

**Survey of Household Spending (SHS):** an annual survey that began in 1997 and replaced the Family Expenditure Survey and the Household Facilities and Equipment Survey. The SHS collects data on expenditures, income, household facilities and equipment, and other characteristics of families and individuals living in private households.

**Gambling industries:** This industry group covers establishments primarily engaged in operating gambling facilities, such as casinos, bingo halls and video gaming terminals; or providing gambling services, such as lotteries and off-track betting. It excludes horse race tracks and hotels, bars and restaurants that have casinos or gambling machines on the premises.

**Gambling profit:** net income from provincial and territorial government-run lotteries, casinos and VLTs, after prizes and winnings, operating expenses (including wages and salaries), payments to the federal government and other overhead costs are deducted.

**Gambling revenue:** all money wagered on provincial and territorial government-run lotteries, casinos and VLTs, less prizes and winnings. Gambling revenue generated by and for charities and on Indian reserves is excluded.

**Government casino:** a government-regulated commercial casino. Permits, licences and regulations for casinos, both charity and government, vary by province. Government casinos, now permitted in several provinces, also vary by the degree of public and private involvement in their operations and management. Some government casinos are run entirely as Crown corporations, while others contract some operations—for example, maintenance, management or services—to the private sector.

**Video lottery terminal (VLT):** a coin-operated, free-standing, electronic game of chance. Winnings are paid out through receipts that are turned in for cash, as opposed to cash payments from slot machines. Such terminals are regulated by provincial lottery corporations.

## Household expenditure on all gambling activities by income groups, 2004

	Average expenditure		Percentage reporting	Gaming as % of total income	
	All households	Reporting households		All households	Reporting households
	\$	\$	%	%	%
<b>Income after tax</b>	<b>364</b>	<b>514</b>	<b>71</b>	<b>0.6</b>	<b>0.8</b>
Less than \$20,000	155	283	55	1.2	2.0
\$20,000 to 39,999	345	504	68	1.2	1.7
\$40,000 to 59,999	313	420	75	0.6	0.8
\$60,000 to 79,999	390	495	79	0.6	0.7
\$80,000 and over	665	847	79	0.6	0.8

Source: Statistics Canada, Survey of Household Spending

## ■ Notes

1 Refers to total money wagered on non-charity lotteries, casinos and VLTs, minus prizes and winnings.

2 Survey of Household Spending (SHS) and National Accounts rankings of provincial expenditures differ, in part because the SHS includes both charity and non-charity gambling activity.

3 The expenditure figures are not adjusted for any winnings. As well, households consistently under-report the amount of money they spend on gambling. Comparisons with Lottery Corporation figures, for example, have shown that households under-report their government lottery purchases by more than 50%.

*For further information on any of these data, contact Katherine Marshall, Labour and Household Surveys Analysis Division. She can be reached at (613) 951-6890 or [katherine.marshall@statcan.ca](mailto:katherine.marshall@statcan.ca).*



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# PERSPECTIVES

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**WINTER 2006**

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### 7 The core-age labour force

*Jacqueline Luffman*

From 1995 to 2004, the proportion of women and men aged 25 to 54 in the labour force grew steadily. However, from 2004 into the first half of 2006, both women's and men's participation rates declined very slightly yet persistently. Is this the beginning of a new trend or does it merely reflect regular fluctuations in the economy? Particular attention is focused on women with young children.

### 14 Earnings instability

*René Morissette and Yuri Ostrovsky*

Using tax data, this paper examines earnings instability among lone parents, unattached individuals, and two-parent families over the past two decades. When income tax effects and main sources of income were considered, no strong evidence of a widespread increase in instability was found. Government transfers play a particularly important role in reducing the earnings instability of lone mothers and unattached individuals.

### 26 Training through the ages

*Cathy Underhill*

Rapid technological change and an increased emphasis on skill-based knowledge have led to an increased need for training entry-level workers and retraining older ones. How do the training rates of workers aged 25 to 34 compare with those aged 55 to 64? Personal and job-related characteristics are examined for training participants, as are employer support, self-directed learning, barriers faced, and objectives and outcomes of training.

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## 37 Balancing career and care

Wendy Pyper

Just as the responsibility of raising children is lifting, many families are facing a new challenge—providing care to aging parents, relatives or friends. The intensity of work and elder care can affect the work–life balance of the caregiver. An examination of the prevalence and impact of caregiving among those aged 45 to 64, looking at the hours spent on both paid work and informal care of seniors.

## 48 Measuring housing affordability

Jacqueline Luffman

A household's ability to afford housing has traditionally been measured using income information derived from the census. A household spending 30% or more of its income on shelter was considered to have a shelter-cost burden. The Survey of Household Spending provides an alternative denominator based on total household spending.

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# Forum

## Erratum

Table A (p. 13) in “Converging gender roles” in our Autumn 2006 edition double counted families. The corrected table is shown below.

**Table A Husband-wife families with children under 16 at home**

	1976		1986		1992		2005	
	'000	%	'000	%	'000	%	'000	%
<b>Total</b>	<b>2,832</b>	<b>100</b>	<b>2,737</b>	<b>100</b>	<b>2,766</b>	<b>100</b>	<b>2,743</b>	<b>100</b>
Dual-earner	1,021	36	1,453	53	1,595	58	1,879	69
Single-earner <sup>1</sup>	1,520	54	898	33	699	25	573	21
Mother at home	1,496	98	860	96	639	91	511	89
Father at home	25	2	38	4	60	9	63	11
Other <sup>2</sup>	290	10	386	14	472	17	290	11

<sup>1</sup> Stay-at-home parent must not be looking for work, but must be able to work and not attending school.

<sup>2</sup> Includes no-earner families and single-earner families with an unemployed spouse.

Source: Statistics Canada, Labour Force Survey

## Perspectives

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# Highlights

## *In this issue*

### ■ The core-age labour force ... p. 7

- From 1995 to 2004, the proportion of women and men aged 25 to 54 in the labour force grew steadily. However, from 2004 into the first half of 2006, both women's and men's participation rates declined very slightly yet persistently.
- For the most part, women with children under 6 did not contribute to the decline. Their labour force participation rates increased steadily from 1995 to 2005 (from 67% to 74%). However, rates varied notably by province, possibly because of different economic cycles and child-care policies. For example, the rate in Alberta dropped 1.2 percentage points while increasing 3.8 points in Nova Scotia.
- Seven in 10 women with babies less than a year old were in the labour force in 2005, the highest rate on record.
- Reasons for the slight decline are complex. However, it seems likely that withdrawing from the labour force is a temporary phenomenon for those aged 25 to 54. This is suggested by a rise in those leaving for personal or family reasons (4.4% of women) as well as job dissatisfaction (3.2% of men).

### ■ Earnings instability ... p. 14

- Earnings instability varies considerably and is much higher among families in the bottom third of the employment income scale than among those in the top third.

- Government transfers provide a substantial offset for income losses and thus reduce income volatility. The progressive nature of income taxes further reduces volatility by restricting both income gains and income losses.
- Social assistance appears to be the single most important factor in reducing income instability among lone mothers in all age groups.
- Among unattached individuals with positive earnings in all six years of a considered period, Employment Insurance was far more important than social assistance in reducing instability.

### ■ Training through the ages ... p. 26

- In 2002, approximately 1 in 3 employees aged 25 to 64 participated in formal job-related training.
- Fewer older workers (aged 55 to 64) than younger workers (25 to 34) took training in 2002. They also spent less time doing it (60 hours versus 190). However, a greater number of older workers participated in 2002 than in 1997, increasing their hours as well.
- In general, workers with a university degree were more likely to take training than those with a high school diploma or less, as were those with a higher versus lower household income.
- Seven in 10 workers who engaged in job-related training received employer support of some type. The odds of receiving employer support were significantly lower for older employees and those with a university education. Odds were higher for full-time workers, the unionized, and workers with longer tenure.



## ■ **Balancing career and care** ... p. 37

- In 2002, over one million employed people aged 45 to 64 provided informal care to seniors with long-term conditions or disabilities. One-third of male caregivers spent one hour or less per week, compared with less than a quarter of the women. Women were more likely to spend four or more hours per week.
- While the majority of low-intensity caregivers felt few or no socio-economic consequences, high-intensity caregiving had substantial effects for more than half of all women caregivers, regardless of hours of paid work. When higher degrees of caregiving and employment were combined, two-thirds of women experienced substantial employment-related consequences.
- The proportion of women experiencing substantial caregiver burden increased with hours of caregiving, regardless of employment intensity. For the most part, at each caregiving intensity level, higher levels of employment hours were associated with higher proportions of stress.
- Among women caregivers who had not retired, 21% reported that the need to provide care would be a likely reason for retirement, compared with 13% of non-caregivers. Among those already retired, 1 in 5 reported caregiving as a reason, twice the rate of those not providing care. Women were more than twice as likely to report this reason.

## ■ **Measuring housing affordability** ... p. 48

- In 2004, about 1 in 7 (1.7 million) households saw 30% or more of their spending go for shelter. Renters were much more likely than owners to fall into this category—31% compared with 6%.
- Renters spending 30% or more on shelter were more likely to be individuals living alone, and those spending 50% or more were more likely to be reliant on government transfers (81%).
- Spending on rent varied considerably across the country. For the most part, the larger the city, the higher the costs. In the largest cities, just under a

third of renters spent 30% or more on shelter, compared with just 19% in rural areas. Even after taking into account income levels and other household characteristics, Toronto and Calgary renters had four times the odds of spending 30% or more on shelter than renters in rural areas.

- Regardless of whether the household consisted of an individual living alone, a lone-parent family, or a senior family, being in low income was a highly significant factor in shelter-cost burden. Renters with household income up to \$19,190 a year had 18 times the odds of being cost-burdened compared with those in the top half of the income distribution.

## ■ **What's new?** ... p. 58

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# The core-age labour force

Jacqueline Luffman

**T**he Canadian labour market has been transformed since World War II by the increased participation of women, particularly those in the core working-age group (25 to 54). Indeed, except for a brief period during the recession of the early 1990s when their participation rate stalled around 75%, the proportion of women in the labour force grew steadily until 2004. Since then,<sup>1</sup> rates have declined very slightly and are now hovering around 81%. Nevertheless, the participation rate for Canadian women aged 25 to 54 compared favourably with other countries in 2005 (Chart A), and ahead of American women, whose rate fell from 76.4% to 75.3% between 2001 and 2005. Is the slight decline in Canada the beginning of a new trend, or does it merely reflect regular fluctuations in the economy or other socio-economic conditions?<sup>2</sup>

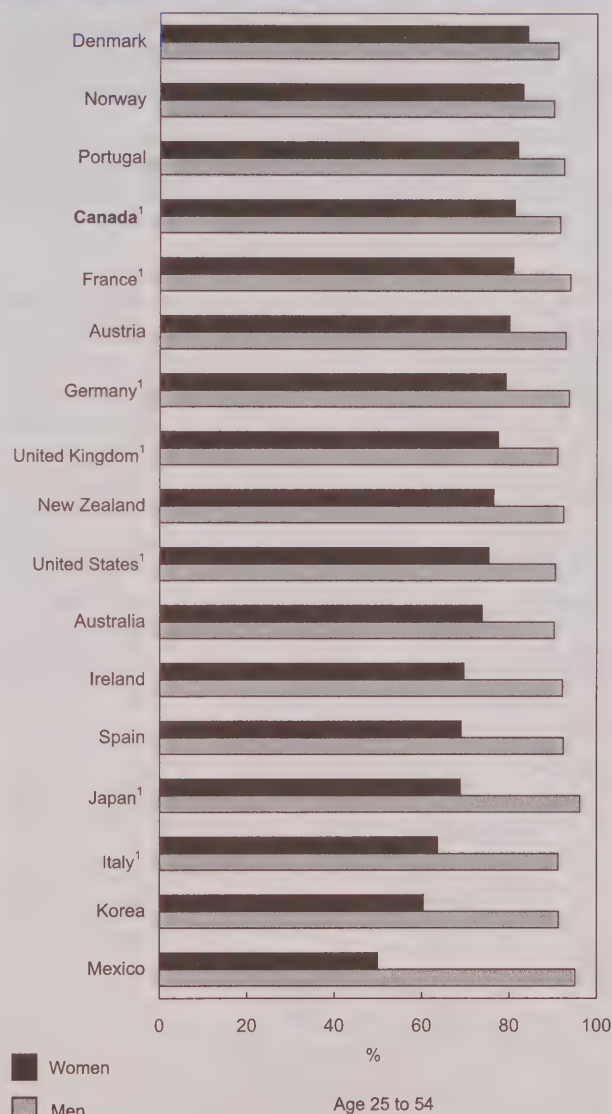
Using the Labour Force Survey (LFS), this article examines labour force participation rates of women and men aged 25 to 54 by province, education and marital status over the past 10 years. Particular attention is focused on women with young children.

## Overall, participation rates for men and women continue to converge

With the wholesale entry of women into the labour market, men's and women's labour force participation rates and employment rates have been converging (Chart B). Since 1995, men's participation rate has been relatively flat, reaching a peak in 2003 and 2004 at 91.6% before dropping very slightly in 2005. Employment growth in the service-producing sector of the economy favoured women throughout the 1990s while men struggled with job losses in manufacturing.

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**Chart A Canadian women's labour force participation rate compared favourably with other nations in 2005**



<sup>1</sup> G8 member.

Source: OECD Employment Outlook, 2006



## Data source and definitions

The **Labour Force Survey (LFS)** collects information monthly on labour market activity from the civilian, non-institutionalized population 15 years of age and over. The territories are excluded from the national total, as are persons living on Indian reserves. The survey samples approximately 54,000 households, with each remaining in the sample for six consecutive months. The LFS divides the working-age population into three mutually exclusive classifications: employed, unemployed, and not in the labour force. For a full listing and description of LFS variables, see *Guide to the Labour Force Survey* (Statistics Canada Catalogue no. 71-543-GIE).

**Labour force:** The civilian, non-institutionalized population 15 years of age and over who, during the survey reference week, were employed or unemployed. Note: Persons on maternity or parental leave were considered employed if they had retained their job. Those who did not have a job but were looking for work were considered unemployed and therefore also part of the labour force.

**Participation rate:** Labour force (employed plus unemployed) as a percentage of the population 15 and over. The participation rate for a particular group is the labour

force in that group expressed as a percentage of the population for that group.

**Employment–population ratio or employment rate:** Percentage of the population employed.

**University-educated:** Individuals with a bachelor's degree or higher.

**College-educated:** Individuals with a certificate or diploma from a community college or CEGEP, a trades certificate, or a university certificate below a bachelor's level.

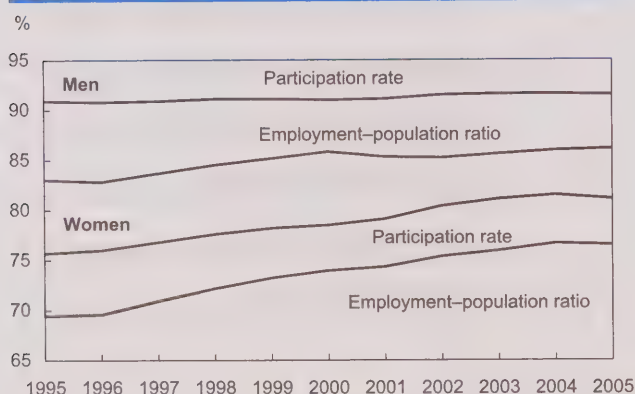
**Child under 6:** The youngest child in the family was under 6; other children in the family may be older.

**Child aged 6 to 17:** The youngest child in the family was aged between 6 and 17.

**Lone parent:** A mother or father, with no spouse or common-law partner present, living in a dwelling with one or more children.

The 2005 participation rate declines for both men and women, the first outside a recessionary period, could be the result of several factors. One could be the increase since 1995 in the number of adults over 25 going to school (data not shown). However, since these people are likely to have continued working, labour force participation rates would not be affected. Per-

**Chart B Labour market activity of men and women 25 to 54 has been converging**



Note: The employment–population ratio is the percentage of the working-age population employed.

Source: Statistics Canada, Labour Force Survey

**Table 1 Reasons for not working in the past year**

	1995	2005
	'000	
<b>Men 25 to 54</b>	<b>590</b>	<b>603</b>
	%	
Job leavers	14.6	16.2
Illness or disability	3.5	3.8
Personal or family reasons	0.6	1.0
School	4.8	4.9
Dissatisfied	1.6	3.2
Retired	1.4	1.5
Other	2.8	1.8
Job losers (permanent layoff)	21.1	12.8
Other <sup>1</sup>	64.3	71.0
	'000	
<b>Women 25 to 54</b>	<b>1,588</b>	<b>1,334</b>
	%	
Job leavers	10.3	12.6
Illness or disability	1.7	2.1
Personal or family reasons	3.2	4.4
School	1.6	2.0
Dissatisfied	1.7	2.5
Retired	0.4	0.7
Other	1.7	1.0
Job losers (permanent layoff)	9.8	7.3
Other <sup>1</sup>	80.0	80.1

<sup>1</sup> Never worked or last worked more than 12 months ago.

Source: Statistics Canada, Labour Force Survey



manent layoffs and voluntary withdrawals from the labour force could also influence the rate. In 2005, almost 13% of men and over 7% of women not in the labour force were on permanent layoff, but these percentages were down from 1995 (Table 1). Job leavers, however, were more common in 2005. For example, 3.2% of men not working said they had left because of dissatisfaction with their last job (compared with 1.6% in 1995). Among women, 4.4% were not in the labour force because of personal or family reasons (such as pregnancy, or caring for children or the elderly) compared with 3.2% in 1995.<sup>3</sup>

### Slight downward trends in participation continue

In Canada, employment follows a seasonal pattern, tending to swell from May through October and then decline for the next six months. In order to explore

**Chart C After years of increase, women's participation rate may have peaked**



Source: Statistics Canada, Labour Force Survey

**Table 2 Participation rates by province**

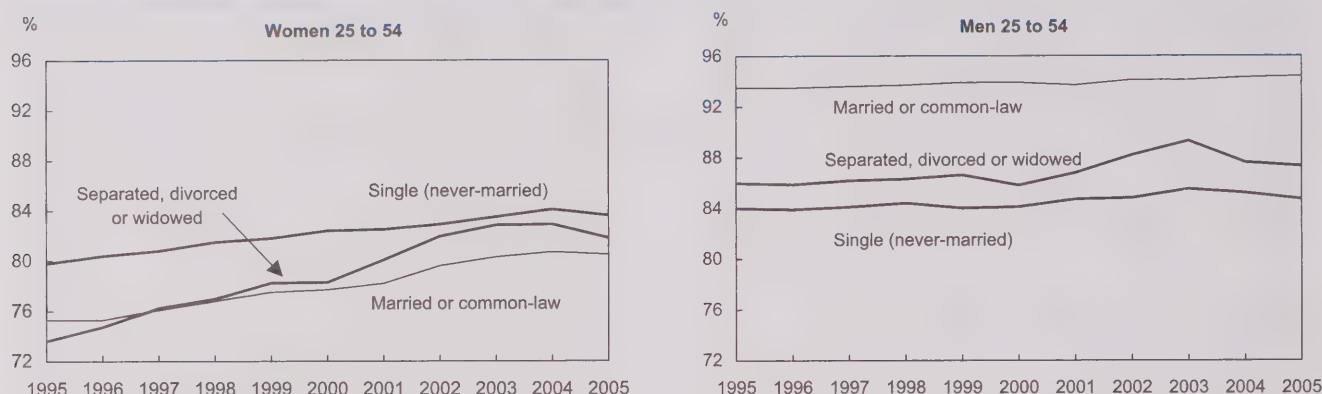
	1995	1998	2001	2004	2005
<b>Women 25 to 54</b>			%		
<b>Canada</b>	<b>75.7</b>	<b>77.6</b>	<b>79.1</b>	<b>81.5</b>	<b>81.1</b>
Newfoundland and Labrador	63.2	66.7	72.0	74.1	74.5
Prince Edward Island	79.6	82.3	83.2	86.3	86.5
Nova Scotia	70.5	73.4	77.4	80.2	80.3
New Brunswick	71.1	73.0	76.1	80.3	80.5
Quebec	72.6	74.9	77.8	81.1	81.6
Ontario	76.7	78.8	80.2	81.9	81.6
Manitoba	80.2	80.9	81.9	84.1	83.0
Saskatchewan	80.1	81.3	80.7	84.2	83.7
Alberta	80.7	81.6	81.4	82.1	80.5
British Columbia	76.9	77.6	77.3	80.5	79.3
<b>Men 25 to 54</b>					
<b>Canada</b>	<b>90.9</b>	<b>91.1</b>	<b>91.1</b>	<b>91.6</b>	<b>91.5</b>
Newfoundland and Labrador	79.0	79.8	81.9	83.9	84.2
Prince Edward Island	90.7	88.9	91.6	91.1	91.0
Nova Scotia	87.1	88.2	88.0	89.9	89.3
New Brunswick	84.3	86.6	86.9	88.1	88.6
Quebec	89.2	89.9	90.0	90.9	90.7
Ontario	91.7	92.0	92.3	92.2	92.1
Manitoba	93.0	93.2	93.2	93.5	92.7
Saskatchewan	93.2	93.1	92.2	92.9	92.6
Alberta	94.4	94.3	93.6	93.8	93.9
British Columbia	92.4	90.4	89.4	90.4	90.0

Source: Statistics Canada, Labour Force Survey

the most recent data (the first half of 2006), average participation rates were calculated for the first six months of calendar years (Chart C). For men, this half-year rate stood at just over 91% from 2003 to 2005, declining fractionally in 2006 to 90.9% nationally. The rate for women generally rose between 1995 and 2004, edging down in 2005 from 81.6% to 81.3%. The first six months of 2006 saw another very small decline to 81.2%.

Labour force participation depends on many factors, including availability of jobs, education level, presence of children, and daycare, and the rates can vary greatly from province to province. In 2005, women in Prince Edward Island had the highest participation rate (86.5%) while those in Newfoundland and Labrador had the lowest (74.5%). The high rate in Prince Edward Island could be due to the province's largely agricultural, rural-based economy. Older women in rural areas are more likely than those in urban areas to be employed when all other factors are held constant (Vera-Toscano, Phimister and Weersink 2000).

**Chart D Labour force participation declined most among the separated, divorced or widowed**



Source: Statistics Canada, Labour Force Survey

Between 1995 and 2004, all provinces saw women's participation rates rise (Table 2). Since 2004, trends have been mixed. Provinces west of Quebec saw a decline between 2004 and 2005, whereas the Atlantic provinces and Quebec posted increases. Alberta had the greatest percentage point drop (-1.6), but the rate remained above 80% as it has since 1995. Interestingly, Alberta's live birth rate increased 8.9% between 2000 and 2003, compared with an increase of 2.2% for all of Canada.

Similarly, several provinces saw men's labour force participation rates begin to drop after 2004. In fact, in Saskatchewan and especially British Columbia, the decline has been evident since 1995. Forestry jobs in British Columbia have been declining since the late 1990s, likely affecting men's participation rates. Lay-offs continued into 2005 for lumber and pulp and paper, both of which employed about a third less people than in 1999 (Cross 2006). Between 2004 and 2005, only Newfoundland and Labrador, New Brunswick, and Alberta showed increases in men's participation rates.<sup>4</sup> Provinces with a large manufacturing base, such as Ontario and Quebec, saw job losses in manufacturing industries in 2005, partly as the result of a rising dollar and the cost of raw materials.

#### More married women in the labour force...

Both single (never-married) women and married (including common-law) women in the core working-age population increased their participation rates

between 1995 and 2004 (4.3 and 5.4 percentage points respectively) (Chart D). Since 2004, separated, divorced or widowed women had the greatest percentage point drop (-1.1). Married men's participation rates have increased slowly as well since 1995 (from 93.5% in 1995 to 94.4% in 2005). Like their female counterparts, single men's participation rates experienced a slight decline between 2004 and 2005.

#### ...as well as more female lone parents

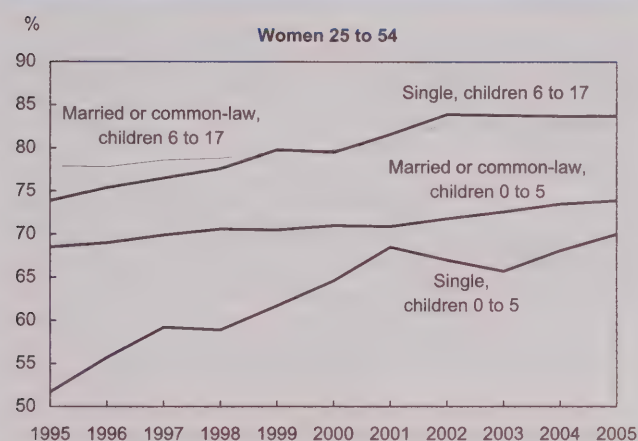
The proportion of female lone-parent families grew substantially between 1991 and 2001.<sup>5</sup> According to the LFS, about 13% of families with a child under 6 were headed by female lone parents in 2005. Female lone parents increased their labour force participation from 67% in 1995 to 80% in 2005. Those with a child under 6 saw their rate jump by 18 percentage points (Chart E). However, married women with a child under 6 also showed steady increases. Seven in 10 married women with a child under 6, and 8 in 10 with a child aged 6 to 17, were in the labour force in 2005.

#### Almost 9 in 10 university-educated women in the labour force

Women with a university degree maintained their participation at around 87% between 1995 and 2005, although they appear to have reached a peak of 87.3% in 1999, dipping to 86.7% in 2005 (Chart F). College-educated women, on the other hand, showed steady increases until 2003. Much of the decline between 2004



**Chart E The participation rate of lone-parent women with pre-schoolers has jumped since 1995**



Source: Statistics Canada, Labour Force Survey

and 2005 came from women with some postsecondary education and those with less than a high school diploma (-1.9 and -1.8 percentage points respectively).

Both university-educated and college-educated men have experienced stable labour force participation since 1995.

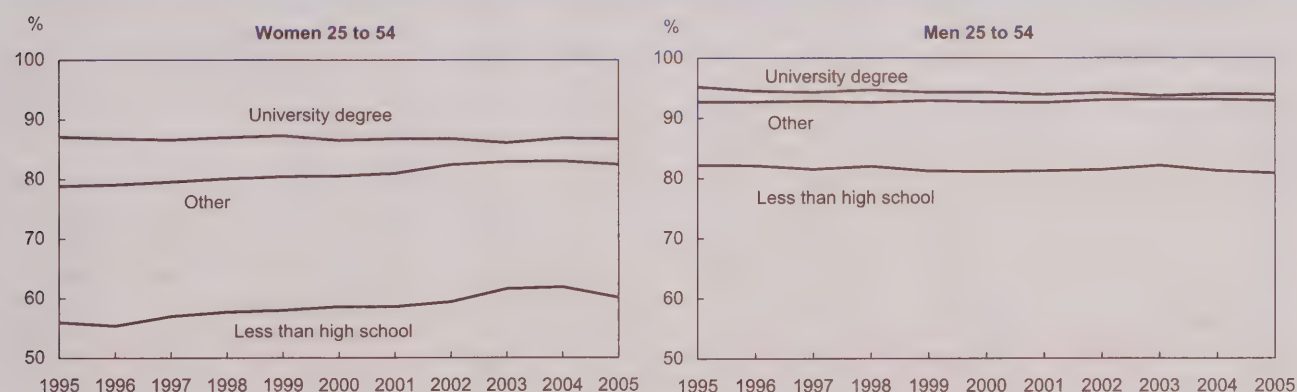
### Majority of women with young children working or looking for work, but rates vary provincially

Women with young children<sup>6</sup> increased their labour force participation rates between 1995 (67%) and 2005 (74%) (Table 3). Despite the slight decline in participation rate for all women between 2004 and 2005, women with young children saw a slight increase (0.5 of a percentage point). The latter was driven largely by Nova Scotia and Ontario with their increases of 3.8 and 1.6 points respectively.

Provincial rates varied, probably as a result of different economic cycles as well as child-care policies. For example, in Alberta, the participation rate dropped for all women as well as for women with young children (-1.2 points). Interestingly, Alberta had the smallest share of children in daycare, and daycare spaces in the province have declined (Roy 2006).

Conversely, Newfoundland and Labrador, New Brunswick, and Prince Edward Island saw overall rate increases for women but drops for women with young children between 2004 and 2005. In Quebec, the overall rate increased, while the rate for women with young children edged up slightly (0.1 of a percentage point since 2004). The steady increase in Quebec may be linked with the introduction of \$5-per-day daycare centres in 1997 (\$7 as of November 2003).

**Chart F University-educated women continued to have high participation rates; men's rates remained fairly constant for all education levels**



Source: Statistics Canada, Labour Force Survey



## Highest rate ever for women with young babies

Seven in 10 women with babies less than a year old were in the labour force in 2005, the highest rate on record (Chart G).<sup>7</sup> This may be the result of a change in Employment Insurance (EI) legislation governing parental leave. Starting December 31, 2000, this leave for employed parents was increased from 10 to 35 weeks. Since that time, those receiving EI benefits have been taking more time off work (Marshall 2003). While the labour force participation rates of women with young babies dipped between 2001 and 2002 (-1.2 percentage points), they subsequently increased substantially (4.1 points since 2002). This suggests that the longer time allowed off work after childbirth has enabled more women to remain in the labour force. On the other hand, the participation rate of women with children aged between 1 and 2 (after EI benefits have ceased), showed a slight drop (-0.4 of a percentage point) between 2004 and 2005.

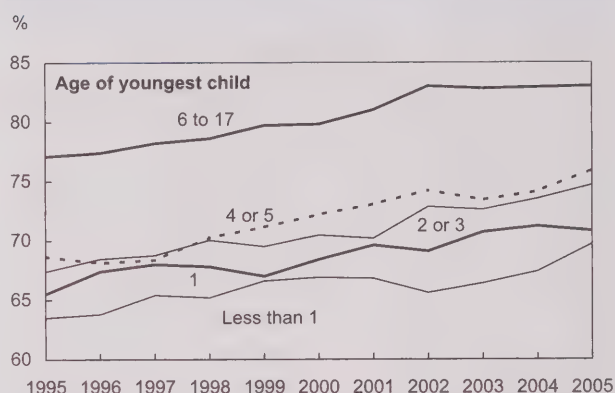
Overall, as one would expect, the older the children at home, the more likely the women are to be in the labour force (70% with a child less than a year old, 83% with all children 6 or over).

**Table 3 Participation rates for women 25 to 54 with children under 6**

	1995	1998	2001	2004	2005
	%				
<b>Canada</b>	<b>66.7</b>	<b>69.2</b>	<b>70.7</b>	<b>73.0</b>	<b>73.5</b>
Newfoundland and Labrador	63.6	67.1	68.6	72.7	71.4
Prince Edward Island	76.3	82.9	77.8	85.9	83.5
Nova Scotia	67.4	70.4	73.6	74.3	78.1
New Brunswick	63.5	68.2	72.3	78.3	78.0
Quebec	65.3	68.4	72.6	77.8	77.9
Ontario	67.5	70.4	71.5	72.1	73.7
Manitoba	69.6	70.1	70.5	73.3	70.8
Saskatchewan	71.9	71.5	71.7	73.4	73.0
Alberta	68.9	69.0	66.5	67.4	66.2
British Columbia	63.1	66.4	67.0	70.6	70.4

Source: Statistics Canada, Labour Force Survey

**Chart G Since the 2000 EI changes, the participation rate of women 25 to 54 with young babies has jumped**



Source: Statistics Canada, Labour Force Survey

## Summary

Since 1995, labour force participation rates for women aged 25 to 54 have generally increased in line with an expanding economy. In 2004, however, their rates started to decline, accompanied by a slight drop for their male counterparts. On the one hand, men and women are now more likely to voluntarily leave the labour force, probably only temporarily, because of dissatisfaction or personal or family reasons. On the other hand, the national picture portrays strong growth in the number of women with children (especially very young ones) entering or staying in the labour market.

Participation rates for both men and women aged 25 to 54 continued to decline marginally in the first half of 2006. But because participation rates among the core working-age population can be affected by many socioeconomic conditions, it is still too early to know whether the trend will continue.

## ■ Notes

- 1 Includes the first six months of 2006.
- 2 Participation rates for immigrant women differ from those for non-immigrant women. According to the 2001 Census, the rate for immigrant women aged 25 to 54 was lower than for non-immigrant women (75.2% versus 80.9%). In addition, recent immigrants (those who arrived between 1996 and 2001) had a lower participation rate than those who arrived earlier.
- 3 The Labour Force Survey asks individuals who are not in the labour force but who have worked within the previous year why they left that job. Reasons are own illness, personal or family responsibilities, going to school, no specific reason, changed residence, dissatisfied with job, retired, and permanent layoff. The question is not asked of those who never worked or who last worked more than a year ago.
- 4 For further analysis on provincial trends in women's labour force participation rates, see Roy (2006).
- 5 Over one million female lone-parent families were counted in the 2001 Census. These families represented 20.1% of all families with children, up from 16.4% in 1991.
- 6 Refers to women whose youngest child is under the age of 6.
- 7 Women on maternity leave or parental leave are still considered to be in the labour force as long as they have a job to go back to or are looking for work.

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# Earnings instability

René Morissette and Yuri Ostrovsky

A stable stream of earnings is key to supporting many aspects of life. A regular job allows young people to leave the parental home and contemplate starting a family. The accompanying access to credit can enable the purchase of a home or car. The planning horizon lengthens so that investment and savings are more likely to be included in the household budget. Any earnings instability can hinder these steps, as well as increase the anxiety and stress of individuals and family members.

Earnings shocks within families can be dampened by the presence of multiple earners. However, a significant minority of Canadians either remain unmarried or become divorced (or widowed), and many of them become lone parents. Lone parents and unattached individuals are potentially more vulnerable to the effects of income instability since they have fewer income-smoothing options. Almost a quarter of employed lone mothers (the vast majority of lone parents) had low weekly earnings in 2000 (Chung 2004).<sup>1</sup> Lone parents may be affected by inflexible work hours, long commutes, and, in some communities, the absence of daycare. These factors and the general strain of lone parenthood are likely to reduce the employment prospects of lone parents and make them more prone to earnings instability. More than half of low-paid lone parents live in low-income families, although the situation of lone mothers was better in 2000 than in 1980.<sup>2</sup>

Unattached individuals are also vulnerable to earnings instability, particularly those under 40 with low income. In 2000, 22% of men and 31% of women under 40 were low-paid workers. Over 80% of low-paid unattached women were also in the low-income category, compared with 14% of low-paid married women. The proportion of unattached low-paid men in low income was slightly lower (78%) (Chung 2004).

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Table 1 Earnings instability

	1984-1989	1994-1999	1999-2004	Change
<b>Two-parent families</b>				%
<b>Husband aged</b>				
25 to 29	0.17	0.19	0.19	11.8**
30 to 34	0.15	0.16	0.17	13.3**
35 to 39	0.15	0.15	0.15	0.0
40 to 44	0.15	0.15	0.15	0.0
45 to 49	0.17	0.17	0.16	-5.9
<b>Lone parents</b>				
<b>Men</b>				
25 to 29	0.25	0.32	0.25	0.0
30 to 34	0.19	0.25	0.27	42.1**
35 to 39	0.19	0.19	0.22	15.8
40 to 44	0.18	0.18	0.19	5.6
45 to 49	0.19	0.19	0.18	-5.3
<b>Women</b>				
25 to 29	0.31	0.35	0.39	25.8**
30 to 34	0.26	0.29	0.32	23.1**
35 to 39	0.24	0.25	0.26	8.3**
40 to 44	0.23	0.21	0.22	-4.3
45 to 49	0.22	0.19	0.21	-4.5
<b>Unattached</b>				
<b>Men</b>				
25 to 29	0.26	0.25	0.24	-7.7
30 to 34	0.23	0.21	0.21	-8.7
35 to 39	0.19	0.19	0.18	-5.3
40 to 44	0.18	0.18	0.17	-5.6
45 to 49	0.19	0.19	0.18	-5.3
<b>Women</b>				
25 to 29	0.21	0.22	0.21	0.0
30 to 34	0.16	0.17	0.18	12.5**
35 to 39	0.15	0.16	0.17	13.3**
40 to 44	0.15	0.15	0.16	6.7*
45 to 49	0.15	0.17	0.17	13.3**

\* Difference between 1999-2004 and 1984-1989 is positive and significant at the 5% level.

\*\* Difference between the 1999-2004 and 1984-1989 is positive and significant at the 1% level.

Source: Statistics Canada, Longitudinal Administrative Databank

These figures suggest that lone parents and unattached individuals are also likely to experience greater financial insecurity. This study compares lone parents and unattached individuals with two-parent families over



the past two decades. The role of government transfers and family benefits in reducing earnings instability is also examined.

## Earnings instability

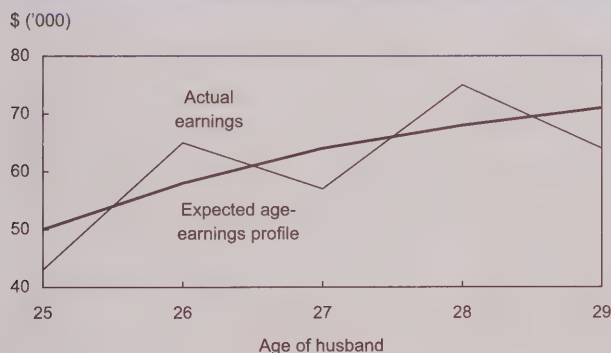
Earnings instability is measured by the short-term, up-and-down movements of an individual's or family's earnings around a longer-term average (Chart A). The analyses in this article describe annual variations around a six-year average adjusted for group-specific time trends (see *Data source and definitions*). All age ranges refer to the age of the individual (or husband for couples) at the beginning of each six-year period.

### Two-parent families

The measure of earnings instability for two-parent families shows little indication of a widespread increase in instability in the past 20 years (Table 1). Among families with husbands aged 25 to 34, instability increased by about 12% to 13%, while for older couples, it either remained unchanged or fell slightly. (Among couples with husbands aged 45 to 49, it actually fell by about 6%.) Two-parent families had the lowest earnings instability, and this has remained virtually unchanged since the late 1980s.

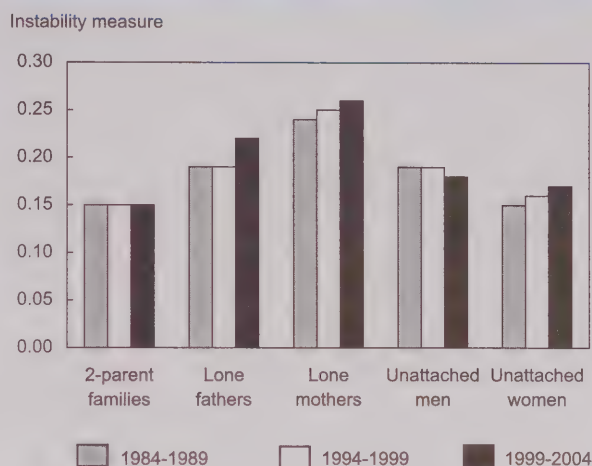
A small increase in earnings instability between 1984-1989 and 1999-2004 was evident for all age groups under 40 in the top third of earners (Table 2); however, virtually no change occurred for the bottom and middle thirds among families with husbands aged 35 and over, while a small increase was noted among younger families.

**Chart A Earnings instability measures the deviation of actual annual earnings from a longer term average**



Source: Hypothetical data, for illustration only

**Chart B Lone mothers 35 to 39 had the highest earnings instability in all three time periods**



Source: Statistics Canada, Longitudinal Administrative Databank

### Lone parents

In general, earnings instability is greater among lone parents than among any other family category. The vast majority of lone parents (about 90%) are mothers, whose ability to smooth the flow of earnings is limited. Not surprisingly, the earnings instability of lone mothers is especially high, and it has grown in the past two decades (Chart B). Although changes in earnings instability differ considerably by age, the instability among young mothers (aged 25 to 34) rose by almost a quarter, with equal increases between the late 1980s and 1990s, and late 1990s and early 2000s. Unattached men and lone fathers experienced about the same level of earnings instability in the 1980s and 1990s. However, between the 1984-1989 and 1999-2004 periods, instability rose for lone fathers aged 30 to 34 but did not increase for unattached men.

The highest earnings instability is found among lone mothers aged 25 to 29 in the bottom third of earners. The average annual deviation from the mean earnings in this group was 58 log points during the 1999-2004 period, greater than in the 1980s and 1990s. In fact, the increase in instability between the 1984-1989 and 1999-2004 periods was higher than for any other age group in this earnings group (about 16%). In addition, for lone mothers younger than 35, instability increased in all earnings groups, including the top

## Data source and definitions

The study uses a 10% version of Statistics Canada's **Longitudinal Administrative Databank (LAD)** based on tax data. LAD files provide detailed information about both individual and family income for those who filed an income tax return between 1982 and 2004 (the last year available at the time of writing). A 20% sample of all taxfilers is randomly selected, and individuals remain in the sample for as long as they appear on the T1 Family File (T1FF). Census families are formed from the personal data that filers provide on other family members. Filers are attached to their spouse (legal and common-law) by spouse's social insurance number, or by matching age, sex, address and marital status. LAD's panel nature, size, and richness of income data make it very attractive for studies of income inequality and instability. The most serious drawback is the limited range of demographic variables.

Three sets of lone parents and unattached individuals aged 25 to 49 were identified: those who filed tax returns each year from 1984 to 1989, 1994 to 1999, or 1999 to 2004. Only those whose family status did not change during their six years in the sample were considered. Similarly, two-parent families with husbands aged 25 to 49 whose family status did not change were identified. This allows a focus on earnings instability caused by labour market conditions as opposed to life events. Furthermore, families with self-employment income were excluded in order to measure instability associated with only paid employment.

All earnings, income and transfer figures were converted into year 2004 dollars using the consumer price index.

An important issue is whether families with zero earnings in one or more years should be excluded. Requiring positive earnings in all six years significantly reduces the size of the sample, particularly in the case of lone parents, but it has the advantage of allowing the use of log earnings. Assuming that families with zero earnings in one or more years do not differ in any systematic way is admittedly a strong assumption.

An alternative is to allow zero earnings in one or more years and analyze a model of earnings levels (as opposed to log earnings). To check the robustness of the main results, a broader sample allowing zero annual earnings in up to three years over a six-year period is considered.

In the analysis of the effect of the progressive income tax system and government transfers, a small percentage of families with non-positive market income is also dropped.

To investigate how earnings instability varies by age and earnings distribution, two-parent families, lone parents and unattached individuals are divided into five age groups (25 to 29, 30 to 34, 35 to 39, 40 to 44, and 45 to 49) and employment income thirds. Two-parent families are grouped based on the age of the husband. Employment income thirds are based on family earnings averaged over a six-year period.

One important aspect of earnings instability smoothing is the role of government transfers—in particular, Employment Insurance (EI) and social assistance. Unfortunately, the social assistance variable is available starting only in 1992. Moreover, EI underwent major changes in 1993 that

considerably reduced the number of people eligible for benefits. Hence, in analysis related to the role of different smoothing mechanisms (including government transfers), only the periods 1994 to 1999 and 1999 to 2004 are used.

The first step is to assume that log earnings are generated by a random effects model:

$$y_{it} = f(\text{age}_i) + e_i + u_{it}$$

where  $f$  is a quadratic function of age. The model assumes a common age-log earnings profile but allows for different intercepts  $e_i$  for each family (standard random effects model assumptions also apply). The last term in the model is associated with transitory earnings (see Gottschalk and Moffitt 1994; Beach, Finnie and Gray 2003; Morissette and Ostrovsky 2005). Estimating  $\hat{u}_{it}$  and computing  $\text{Var}(\hat{u}_{it})$  provides a simple estimate of earnings instability on either an individual or family level. Another dispersion measure considered is the mean absolute deviation (MAD) from the mean:

MAD has a simple intuitive interpretation: the average deviation (in percentage terms) of actual earnings from expected earnings.

$$\overline{MAD}_i = \left( \frac{1}{N} \right) \sum_{t=1}^N \left[ \left( \frac{1}{T} \right) \sum_{t=1}^T |\hat{u}_{it}| \right]$$

To check the robustness of the results, family earnings are also estimated:  $y_{it}^* = f(\text{age}_i) + e_i^* + u_{it}^*$ , where  $y_{it}^*$  is family earnings (as opposed to log earnings). The mean absolute deviation is then computed by

$$\overline{MAD}_i^* = \left( \frac{1}{N} \right) \sum_{t=1}^N \left[ \left( \frac{1}{T \cdot \bar{y}_i} \right) \sum_{t=1}^T |\hat{u}_{it}^*| \right]$$

where  $\bar{y}_i$  is average family earnings over the six-year period. Note that  $\overline{MAD}_i^*$  has to be rescaled by  $\bar{y}_i$  to account for differences in earnings levels among families. (The results from the latter model are available from the authors.) While both  $\overline{MAD}_i$  and  $\overline{MAD}_i^*$  are calculated for the sample restricted to positive earnings,  $\overline{MAD}_i^*$  is also used to analyze the sample that includes zero earnings.

The analysis of instability and the effects of government transfers and the income tax system emphasizes not only the overall levels of instability but also the differences in instability between the bottom and top thirds of the earnings distribution. The instability in the top third of earners provides a reasonable benchmark for assessing how well families in the bottom third fare, and to what degree transfers and taxes mitigate their earnings instability. Relative earnings instability (or relative income instability) is defined as the ratio of the bottom third to the top third.

Relative instability is used in the analysis of the role of different factors affecting the earnings instability of lone parents and unattached individuals.<sup>3</sup>



**Table 2 Earnings instability by employment income**

	1984-1989			1994-1999			1999-2004		
	Bottom third	Top third	Ratio	Bottom third	Top third	Ratio	Bottom third	Top third	Ratio
<b>Two-parent families</b>									
<b>Husband aged</b>									
25 to 29	0.25	0.12	2.08	0.28	0.13	2.15	0.28	0.14	2.00**
30 to 34	0.23	0.11	2.09	0.25	0.11	2.27	0.25	0.13	1.92**
35 to 39	0.22	0.11	2.00	0.23	0.11	2.09	0.22	0.12	1.83**
40 to 44	0.22	0.11	2.00	0.23	0.10	2.30	0.21	0.11	1.91**
45 to 49	0.24	0.13	1.85	0.25	0.11	2.27	0.23	0.12	1.92**
<b>Lone parents</b>									
<b>Men</b>									
25 to 29	0.42	0.11	3.82	0.55	0.11	5.00	0.33	0.08	4.13**
30 to 34	0.34	0.11	3.09	0.40	0.12	3.33	0.47	0.13	3.62**
35 to 39	0.37	0.09	4.11	0.31	0.10	3.10	0.36	0.11	3.27**
40 to 44	0.31	0.11	2.82	0.30	0.09	3.33	0.30	0.12	2.50**
45 to 49	0.31	0.13	2.38	0.30	0.11	2.73	0.28	0.12	2.33**
<b>Women</b>									
25 to 29	0.50	0.13	3.85	0.52	0.17	3.06	0.58	0.21	2.76**
30 to 34	0.46	0.11	4.18	0.48	0.13	3.69	0.51	0.14	3.64**
35 to 39	0.41	0.12	3.42	0.43	0.10	4.30	0.43	0.12	3.58**
40 to 44	0.35	0.13	2.69	0.37	0.10	3.70	0.38	0.11	3.45**
45 to 49	0.32	0.16	2.00	0.31	0.11	2.82	0.35	0.12	2.92**
<b>Unattached</b>									
<b>Men</b>									
25 to 29	0.43	0.12	3.58	0.41	0.14	2.93	0.37	0.15	2.47**
30 to 34	0.40	0.09	4.44	0.36	0.10	3.60	0.34	0.12	2.83**
35 to 39	0.34	0.09	3.78	0.33	0.09	3.67	0.30	0.11	2.73**
40 to 44	0.33	0.08	4.13	0.32	0.09	3.56	0.28	0.10	2.80**
45 to 49	0.33	0.08	4.13	0.34	0.10	3.40	0.29	0.11	2.64**
<b>Women</b>									
25 to 29	0.36	0.10	3.60	0.35	0.12	2.92	0.32	0.12	2.67**
30 to 34	0.30	0.08	3.75	0.29	0.09	3.22	0.30	0.10	3.00**
35 to 39	0.28	0.07	4.00	0.29	0.08	3.63	0.29	0.09	3.22**
40 to 44	0.27	0.07	3.86	0.29	0.07	4.14	0.28	0.09	3.11**
45 to 49	0.29	0.06	4.83	0.31	0.08	3.88	0.30	0.08	3.75**

\*\* The bottom to top differences in 1999-2004 are positive and significant at the 1% level.  
Source: Statistics Canada, Longitudinal Administrative Databank

third, where it rose by 60% for lone mothers aged 25 to 29. The picture is much different though for older lone mothers. For those 40 and older, the increase in instability occurred only in the bottom third, and the magnitude was much smaller. In the other two earnings groups, instability either dropped or remained unchanged.

One salient finding is that the earnings instability of lone mothers in the bottom third is in some cases more than double that of two-parent families. For instance, in the 35-to-39 age category in 1999-2004, earnings instability for two-parent families was 0.22, while for lone mothers it was 0.43 (Chart C). On the other hand, among the top third of earners, both groups reg-

istered the same (0.12). In the bottom third of the earnings distribution, earnings instability is clearly a much bigger issue for lone parents than for two-parent families.

Not only is earnings instability among young lone parents much higher than for two-parent families, but the difference between top and bottom earners is also much larger. The relative instability ratio was close to two for young two-parent families in 1999-2004, compared with almost three for young lone mothers in 1999-2004 and almost four in 1984-1989. However, while in 1984-1989 relative earnings instability of lone mothers decreased with age, this was no longer true in 1999-2004.

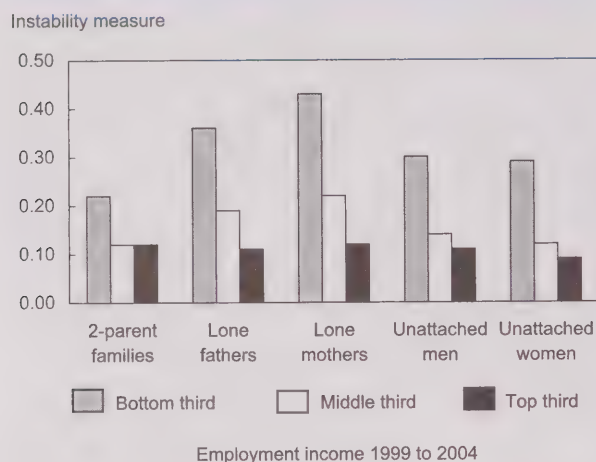
### **Unattached individuals**

Like lone parents, unattached individuals are likely more affected financially by job loss than two-parent families, who can often rely on two incomes. On the other hand, unattached individuals may be more flexible than lone parents in choosing their place of work and work hours. Not surprisingly, the earnings instability of unattached women is lower than that of lone mothers but generally higher than that of two-parent families. While unattached men under 35 have somewhat higher earnings instability than unattached women in all three income groups, their instability dynamics have been quite different. Overall, earnings instability of men declined in the past two decades, albeit modestly, but rose for unattached women 30 or older.

Breaking the trends down by employment income shows that the overall decline in men's earnings instability reflects mostly lower earnings instability in the bottom third (for all age groups). In the



**Chart C Earnings instability in the 35-to-39 age group was significantly greater in the lowest earnings group**



Source: Statistics Canada, Longitudinal Administrative Databank

middle third, instability remained virtually unchanged, while rising for all age groups in the top third. Similarly, the increase in earnings instability among unattached women was by no means universal. For women 30 and over in the bottom third of earnings, it remained virtually unchanged, with most of the increase taking place in the middle and top thirds. As a result, relative earnings instability was lower in 1999-2004 than in 1984-1989 for unattached women in all age groups.

Overall, earnings instability dynamics in Canada in the past 20 years present a fairly complex picture with no indication of widespread increases. Earnings instability varies considerably by age group and income level in both direction and magnitude, and is lowest among two-parent families and highest among lone mothers, particularly young ones. For unattached men, it has declined in recent years but is still somewhat higher than unattached women.

Earnings instability varies considerably with employment income and is much higher among families in the bottom third of earners than the top third. The difference in magnitude varies for age and family category, but it is fair to say that for two-parent families, the bottom-to-top earnings instability ratio is generally smaller, mostly due to lower instability in the bottom third.

It is important to keep in mind that these results pertain to a sub-sample of families and individuals with positive earnings in all six years. Results for a broader sample that includes families with zero earnings in some years are discussed below.

### Taxes, government transfers and income instability

Employment Insurance (EI) and social assistance partially compensate for earnings losses related to job loss. Combined with government transfers in the form of refundable tax credits and the Child Tax Benefit, they provide substantial compensation for income loss and thus reduce income volatility. The progressive income tax system further reduces income volatility by restricting the impact of income gains and losses. This section describes the incremental effects of the tax and transfer system on earnings and income instability.

#### Two-parent families

Differences in earnings instability between top and bottom income groups in the 1999-2004 period were little changed from 1994-1999 for two-parent families. In all age groups, instability was at least 90% larger in the bottom third than in the top third (Table 3). The differences in market income instability were slightly smaller, but they were still in the 73% to 83% range for all groups in 1999-2004.

EI reduces instability for all families in the bottom third. In fact, EI has the largest mitigating effect among the youngest couples (husbands aged 25 to 29). In contrast to other age groups, however, the effect of EI in this age group is also strong in the top income group. Hence, the bottom-to-top difference in instability for market income plus EI is higher for families in this age group than in any other.

The effect of social assistance appears to be somewhat stronger among young couples (25 to 34) than among older ones. However, social assistance substantially reduces both instability and the differences in instability between bottom and top incomes for *all* age groups. The effect of social assistance on relative instability is stronger because it has practically no effect on the two-parent families in the top third of incomes.

In contrast, the role of tax credits in reducing income instability seems to be small. The only group where tax credits play any role is young families (husbands aged 25 to 29).

**Table 3 Income instability and the tax and transfer system for two-parent families**

	1994-1999			1999-2004		
	Bottom third	Top third	Ratio	Bottom third	Top third	Ratio
<b>25 to 29</b>						
Earnings	0.27	0.12	2.25	0.27	0.14	1.93**
Market income	0.25	0.12	2.08	0.25	0.14	1.79**
+Employment Insurance	0.20	0.11	1.82	0.21	0.11	1.91**
+Social assistance	0.18	0.11	1.64	0.19	0.11	1.73**
+Tax credit	0.17	0.11	1.55	0.18	0.11	1.64**
+Family benefit	0.16	0.11	1.45	0.17	0.11	1.55**
Total income	0.15	0.11	1.36	0.16	0.11	1.45**
After tax	0.13	0.10	1.30	0.14	0.10	1.40**
Adjusted for family size	0.14	0.12	1.17	0.15	0.13	1.15**
<b>30 to 34</b>						
Earnings	0.24	0.11	2.18	0.24	0.12	2.00**
Market income	0.23	0.11	2.09	0.22	0.12	1.83**
+Employment Insurance	0.18	0.10	1.80	0.19	0.11	1.73**
+Social assistance	0.16	0.10	1.60	0.17	0.11	1.55**
+Tax credit	0.16	0.10	1.60	0.17	0.11	1.55**
+Family benefit	0.14	0.10	1.40	0.15	0.11	1.36**
Total income	0.14	0.10	1.40	0.14	0.11	1.27**
After tax	0.12	0.09	1.33	0.13	0.10	1.30**
Adjusted for family size	0.13	0.10	1.30	0.13	0.11	1.18**
<b>35 to 39</b>						
Earnings	0.23	0.10	2.30	0.22	0.11	2.00**
Market income	0.21	0.10	2.10	0.20	0.11	1.82**
+Employment Insurance	0.17	0.09	1.89	0.17	0.10	1.70**
+Social assistance	0.16	0.09	1.78	0.16	0.10	1.60**
+Tax credit	0.15	0.09	1.67	0.16	0.10	1.60**
+Family benefit	0.14	0.09	1.56	0.14	0.10	1.40**
Total income	0.13	0.09	1.44	0.13	0.10	1.30**
After tax	0.12	0.09	1.33	0.12	0.10	1.20**
Adjusted for family size	0.12	0.09	1.33	0.12	0.10	1.20**
<b>40 to 44</b>						
Earnings	0.22	0.10	2.20	0.21	0.11	1.91**
Market income	0.20	0.10	2.00	0.19	0.11	1.73**
+Employment Insurance	0.17	0.09	1.89	0.17	0.10	1.70**
+Social assistance	0.16	0.09	1.78	0.16	0.10	1.60**
+Tax credit	0.16	0.09	1.78	0.16	0.10	1.60**
+Family benefit	0.15	0.09	1.67	0.14	0.10	1.40**
Total income	0.14	0.09	1.56	0.14	0.10	1.40**
After tax	0.13	0.09	1.44	0.13	0.10	1.30**
Adjusted for family size	0.13	0.09	1.44	0.12	0.10	1.20**
<b>45 to 49</b>						
Earnings	0.24	0.11	2.18	0.23	0.11	2.09**
Market income	0.21	0.10	2.10	0.20	0.11	1.82**
+Employment Insurance	0.18	0.10	1.80	0.18	0.11	1.64**
+Social assistance	0.17	0.10	1.70	0.17	0.11	1.55**
+Tax credit	0.17	0.10	1.70	0.17	0.11	1.55**
+Family benefit	0.16	0.10	1.60	0.16	0.11	1.45**
Total income	0.15	0.10	1.50	0.15	0.11	1.36**
After tax	0.14	0.10	1.40	0.14	0.11	1.27**
Adjusted for family size	0.13	0.09	1.44	0.13	0.10	1.30**

\*\* The bottom to top differences in 1999-2004 are positive and significant at the 1% level.  
Source: Statistics Canada, Longitudinal Administrative Databank

During the 1999-2004 period, family benefits also lowered employment income instability, particularly among families in the 30-to-44 age range, the ones most likely to have small children. For them, family benefits had the largest effect on reducing the differences between bottom and top income groups by reducing relative instability about 20 log points. For the 35-to-39 and 40-to-44 age groups, the reduction in instability in the bottom third was also substantial.

For the bottom third of earners, instability of total income was 25% to 36% lower than the instability of market income.<sup>4</sup> In other words, government transfers reduced market income instability for two-parent families by at least a quarter, and for those with husbands younger than 35 by more than a third. For all age groups, relative income instability was 1.45 or less, and for the 30-to-34 age group, as low as 1.27. EI, social assistance, and other government transfers reduced the ratio of the bottom to top earnings group from about 1.73-1.83 to 1.27-1.45 depending on age. For families in the bottom third, the total (before tax) income instability was 33% to 42% lower than earnings instability.

Finally, the tax system further reduced instability. The combined reduction after transfers and taxes compared with market income instability was 30% to 44%, and 38% to 48% compared with earnings instability.

In summary, government transfers, and to a smaller degree the income tax system, substantially reduce income instability for two-parent families in the bottom third of the earnings distribution.



### Lone parents

Earnings instability in the 1999-2004 period was highest among young lone mothers ( $MAD_i=0.39$ ) but declined with age by 18 log points (Table 1). It was particularly high among young lone mothers in the bottom income group, 19 log points higher than the average. The difference between the bottom and top third, however, was higher among older lone mothers, with the earnings instability of those aged 30 or more in the bottom third being more than three times higher than those in the top third.

The overall smoothing effect of transfers and taxes on the earnings instability of lone mothers is evident when comparing differences in market-income and after-tax income instability (Tables 4 and 5). The ratio of the bottom third to the top third drops from 2.6 to 1.7 for those 25 to 29, from 3.2 to 1.8 for those 35 to 39, and from 2.5 to 1.5 for those 45 to 49. Notably, for lone mothers aged 30 and older, the drop is mostly or (for those 35 or older) almost entirely due to the fall in instability in the bottom third.

In all age groups, social assistance appears to be the single most important factor in reducing income instability among lone mothers—much more than for two-parent families. In the youngest age group, for instance, it reduces instability in the bottom third by 32% (from 0.4 to 0.3). Since social assistance has little effect on lone mothers in the top third, this also results in the largest drop in differences between bottom and top thirds (23%). The impact of social assistance on instability is somewhat smaller for the 45-to-49 age group, although it is still larger than any other factor.

**Table 4 Income instability and the tax and transfer system for lone mothers**

	1994-1999			1999-2004		
	Bottom third	Top third	Ratio	Bottom third	Top third	Ratio
<b>25 to 29</b>						
Earnings	0.52	0.17	3.06	0.58	0.21	2.76**
Market income	0.47	0.17	2.76	0.52	0.20	2.60**
+Employment Insurance	0.41	0.14	2.93	0.44	0.17	2.59**
+Social assistance	0.20	0.12	1.67	0.30	0.15	2.00**
+Tax credit	0.19	0.12	1.58	0.27	0.14	1.93**
+Family benefit	0.16	0.11	1.45	0.20	0.13	1.54**
Total income	0.16	0.11	1.45	0.20	0.13	1.54**
After tax	0.16	0.10	1.60	0.19	0.11	1.73**
Adjusted for family size	0.16	0.10	1.60	0.19	0.11	1.73**
<b>30 to 34</b>						
Earnings	0.48	0.13	3.69	0.51	0.14	3.64**
Market income	0.41	0.12	3.42	0.45	0.14	3.21**
+Employment Insurance	0.35	0.11	3.18	0.38	0.12	3.17**
+Social assistance	0.21	0.10	2.10	0.26	0.12	2.17**
+Tax credit	0.20	0.10	2.00	0.24	0.11	2.18**
+Family benefit	0.17	0.10	1.70	0.18	0.11	1.64**
Total income	0.17	0.09	1.89	0.17	0.10	1.70**
After tax	0.16	0.08	2.00	0.17	0.09	1.89**
Adjusted for family size	0.16	0.08	2.00	0.17	0.09	1.89**
<b>35 to 39</b>						
Earnings	0.43	0.10	4.30	0.43	0.12	3.58**
Market income	0.36	0.10	3.60	0.38	0.12	3.17**
+Employment Insurance	0.30	0.10	3.00	0.32	0.11	2.91**
+Social assistance	0.20	0.10	2.00	0.25	0.11	2.27**
+Tax credit	0.19	0.09	2.11	0.23	0.11	2.09**
+Family benefit	0.17	0.09	1.89	0.18	0.10	1.80**
Total income	0.16	0.09	1.78	0.17	0.10	1.70**
After tax	0.15	0.08	1.88	0.16	0.09	1.78**
Adjusted for family size	0.15	0.08	1.88	0.16	0.09	1.78**
<b>40 to 44</b>						
Earnings	0.37	0.10	3.70	0.38	0.11	3.45**
Market income	0.31	0.10	3.10	0.33	0.11	3.00**
+Employment Insurance	0.25	0.10	2.50	0.29	0.11	2.64**
+Social assistance	0.18	0.10	1.80	0.22	0.11	2.00**
+Tax credit	0.17	0.09	1.89	0.21	0.11	1.91**
+Family benefit	0.16	0.09	1.78	0.17	0.11	1.55**
Total income	0.15	0.09	1.67	0.16	0.11	1.45**
After tax	0.14	0.09	1.56	0.16	0.10	1.60**
Adjusted for family size	0.14	0.08	1.75	0.15	0.10	1.50**
<b>45 to 49</b>						
Earnings	0.31	0.11	2.82	0.35	0.11	3.18**
Market income	0.26	0.11	2.36	0.30	0.12	2.50**
+Employment Insurance	0.22	0.11	2.00	0.26	0.11	2.36**
+Social assistance	0.18	0.11	1.64	0.21	0.11	1.91**
+Tax credit	0.17	0.11	1.55	0.20	0.11	1.82**
+Family benefit	0.16	0.11	1.45	0.17	0.11	1.55**
Total income	0.15	0.11	1.36	0.17	0.11	1.55 *
After tax	0.14	0.10	1.40	0.16	0.11	1.45 *
Adjusted for family size	0.14	0.09	1.56	0.15	0.10	1.50**

\* The bottom to top differences in 1999-2004 are positive and significant at the 5% level.

\*\* The bottom to top differences in 1999-2004 are positive and significant at the 1% level.

Source: Statistics Canada, Longitudinal Administrative Databank



**Table 5 Income instability and the tax and transfer system for lone fathers**

	1994-1999			1999-2004		
	Bottom third	Top third	Ratio	Bottom third	Top third	Ratio
<b>25 to 29</b>						
Earnings	0.55	0.11	5.00	0.33	0.08	4.13**
Market income	0.52	0.11	4.73	0.33	0.08	4.13**
+Employment Insurance	0.41	0.10	4.10	0.28	0.08	3.50**
+Social assistance	0.22	0.10	2.20	0.22	0.08	2.75**
+Tax credit	0.21	0.09	2.33	0.21	0.07	3.00**
+Family benefit	0.19	0.09	2.11	0.18	0.07	2.57**
Total income	0.19	0.09	2.11	0.18	0.07	2.57**
After tax	0.17	0.07	2.43	0.17	0.06	2.83**
Adjusted for family size	0.17	0.08	2.13	0.17	0.06	2.83**
<b>30 to 34</b>						
Earnings	0.40	0.12	3.33	0.47	0.13	3.62**
Market income	0.39	0.12	3.25	0.46	0.13	3.54**
+Employment Insurance	0.33	0.09	3.67	0.40	0.11	3.64**
+Social assistance	0.23	0.09	2.56	0.30	0.11	2.73**
+Tax credit	0.22	0.09	2.44	0.27	0.11	2.45**
+Family benefit	0.19	0.09	2.11	0.22	0.11	2.00**
Total income	0.18	0.09	2.00	0.21	0.11	1.91**
After tax	0.17	0.07	2.43	0.20	0.10	2.00**
Adjusted for family size	0.17	0.07	2.43	0.20	0.10	2.00**
<b>35 to 39</b>						
Earnings	0.31	0.10	3.10	0.36	0.11	3.27**
Market income	0.29	0.10	2.90	0.32	0.12	2.67**
+Employment Insurance	0.24	0.09	2.67	0.26	0.11	2.36**
+Social assistance	0.20	0.09	2.22	0.22	0.11	2.00**
+Tax credit	0.19	0.09	2.11	0.20	0.11	1.82**
+Family benefit	0.16	0.09	1.78	0.17	0.11	1.55**
Total income	0.15	0.09	1.67	0.15	0.11	1.36**
After tax	0.13	0.08	1.63	0.14	0.10	1.40**
Adjusted for family size	0.13	0.08	1.63	0.14	0.10	1.40**
<b>40 to 44</b>						
Earnings	0.30	0.09	3.33	0.30	0.12	2.50**
Market income	0.27	0.09	3.00	0.29	0.12	2.42**
+Employment Insurance	0.21	0.09	2.33	0.24	0.11	2.18**
+Social assistance	0.19	0.09	2.11	0.22	0.11	2.00**
+Tax credit	0.18	0.09	2.00	0.21	0.11	1.91**
+Family benefit	0.17	0.09	1.89	0.18	0.11	1.64**
Total income	0.16	0.08	2.00	0.15	0.11	1.36**
After tax	0.14	0.08	1.75	0.14	0.10	1.40**
Adjusted for family size	0.14	0.08	1.75	0.14	0.10	1.40**
<b>45 to 49</b>						
Earnings	0.30	0.10	3.00	0.28	0.12	2.33**
Market income	0.24	0.10	2.40	0.24	0.12	2.00**
+Employment Insurance	0.20	0.10	2.00	0.20	0.11	1.82**
+Social assistance	0.17	0.10	1.70	0.18	0.11	1.64**
+Tax credit	0.17	0.10	1.70	0.17	0.11	1.55**
+Family benefit	0.16	0.10	1.60	0.16	0.11	1.45**
Total income	0.15	0.09	1.67	0.14	0.11	1.27**
After tax	0.14	0.10	1.40	0.13	0.11	1.18**
Adjusted for family size	0.13	0.09	1.44	0.13	0.10	1.30**

\*\* The bottom to top differences in 1999-2004 are positive and significant at the 1% level.  
Source: Statistics Canada, Longitudinal Administrative Databank

EI also lowers income instability. In all age groups, it is the second most important factor mitigating instability among lone mothers in the bottom income group. Overall, the reduction in instability (relative to market income) caused by EI and social assistance in the bottom third varies between 32% and 48%. For the youngest lone mothers, social assistance lowers the relative instability ratio from 2.6 (market income) to 2.0, which accounts for about two-thirds of the reduction from market to after-tax income. For older age groups, the effect is similar.

Tax credits and especially family benefits also play an important role in reducing instability in the bottom third. Their inclusion reduces instability for low-income lone mothers by 20% to 36%. All government transfers put together bring down the bottom-third to top-third ratios to levels that for some age groups (25 to 34 and 40 to 44) are lower than the after-tax ratios.

The impact of the progressive tax system is twofold. On the one hand, in all age groups, the instability of after-tax income in the bottom third is lower than the instability of the total income, although the reduction is 6% at most, and in some age groups, close to zero. On the other hand, in some age groups, the tax system has a larger effect in the top third, so the difference between bottom and top thirds is actually larger for after-tax income than before-tax income.

#### **Unattached individuals**

Considerable differences are apparent in the income instability of unattached men and women across age groups (Tables 6 and 7). In the

**Table 6 Income instability and the tax and transfer system for unattached women**

	1994-1999			1999-2004		
	Bottom third	Top third	Ratio	Bottom third	Top third	Ratio
<b>25 to 29</b>						
Earnings	0.35	0.12	2.92	0.32	0.12	2.67**
Market income	0.33	0.12	2.75	0.29	0.12	2.42**
+Employment Insurance	0.27	0.11	2.45	0.25	0.12	2.08**
+Social assistance	0.24	0.11	2.18	0.24	0.12	2.00**
+Tax credit	0.23	0.11	2.09	0.23	0.12	1.92**
Total income	0.23	0.11	2.09	0.22	0.12	1.83**
After tax	0.20	0.10	2.00	0.20	0.11	1.82**
<b>30 to 34</b>						
Earnings	0.29	0.09	3.22	0.29	0.10	2.90**
Market income	0.27	0.09	3.00	0.27	0.10	2.70**
+Employment Insurance	0.21	0.09	2.33	0.23	0.10	2.30**
+Social assistance	0.19	0.09	2.11	0.21	0.10	2.10**
+Tax credit	0.19	0.09	2.11	0.20	0.10	2.00**
Total income	0.18	0.09	2.00	0.19	0.10	1.90**
After tax	0.16	0.08	2.00	0.17	0.09	1.89**
<b>35 to 39</b>						
Earnings	0.29	0.08	3.63	0.29	0.09	3.22**
Market income	0.26	0.08	3.25	0.27	0.09	3.00**
+Employment Insurance	0.21	0.08	2.63	0.23	0.09	2.56**
+Social assistance	0.19	0.08	2.38	0.21	0.09	2.33**
+Tax credit	0.18	0.08	2.25	0.19	0.09	2.11**
Total income	0.17	0.08	2.13	0.18	0.09	2.00**
After tax	0.15	0.07	2.14	0.17	0.08	2.13**
<b>40 to 44</b>						
Earnings	0.29	0.07	4.14	0.28	0.09	3.11**
Market income	0.27	0.07	3.86	0.25	0.09	2.78**
+Employment Insurance	0.20	0.07	2.86	0.20	0.08	2.50**
+Social assistance	0.19	0.07	2.71	0.19	0.08	2.38**
+Tax credit	0.18	0.07	2.57	0.18	0.08	2.25**
Total income	0.17	0.06	2.83	0.17	0.08	2.13**
After tax	0.16	0.06	2.67	0.15	0.08	1.88**
<b>45 to 49</b>						
Earnings	0.30	0.08	3.75	0.30	0.08	3.75**
Market income	0.26	0.07	3.71	0.26	0.08	3.25**
+Employment Insurance	0.21	0.07	3.00	0.22	0.08	2.75**
+Social assistance	0.18	0.07	2.57	0.19	0.08	2.38**
+Tax credit	0.17	0.07	2.43	0.18	0.08	2.25**
Total income	0.16	0.07	2.29	0.17	0.08	2.13**
After tax	0.15	0.06	2.50	0.15	0.08	1.88**

\*\* The bottom to top differences in 1999-2004 are positive and significant at the 1% level.  
Source: Statistics Canada, Longitudinal Administrative Databank

bottom third, the earnings instability of unattached persons under 35 (measured by  $MAD_i$  in 1999-2004) is higher for men than for women. However, in all age

groups, the relative (bottom to top) instability of men's earnings is lower than the relative instability of women's earnings, which is particularly high among women aged 45 to 49.

The most striking difference between unattached individuals and lone parents is that for the former, EI is a far more important factor in reducing instability than social assistance. Compared with market-income instability, the inclusion of EI reduces instability in the bottom third by 17% to 24% among unattached men and 13% to 20% among unattached women. EI also substantially reduces relative instability among both men and women in all age groups. Social assistance does not appear to play a major role among younger unattached individuals. While the reduction in instability it brings about is roughly constant among low-income unattached men of all ages (10%), the rate varies considerably with age among low-income unattached women (4% to 9% for all age groups except 45 to 49 where it peaks at 13%).

EI and social assistance together reduce the relative instability of market income between 20% and 30% for unattached men<sup>5</sup> and between 15% and 27% for unattached women. This is a major component of the overall reduction in relative instability generated by all transfers and the tax system. The overall reduction in relative instability (going from market to after-tax income) ranges from 27% to 38% for unattached men, and 25% to 42% for unattached women. Hence, EI and social assistance account for 65% to 75% of the overall effect for men and about 50% for women.

As with lone parents, the tax system reduces income instability in both bottom and top income thirds, so the impact on relative instability of unattached individuals is small, particularly for men. The effect is somewhat greater for older



**Table 7 Income instability and the tax and transfer system for unattached men**

	1994-1999			1999-2004		
	Bottom third	Top third	Ratio	Bottom third	Top third	Ratio
<b>25 to 29</b>						
Earnings	0.41	0.14	2.93	0.37	0.15	2.47**
Market income	0.39	0.14	2.79	0.35	0.15	2.33**
+Employment Insurance	0.30	0.13	2.31	0.29	0.14	2.07**
+Social assistance	0.26	0.13	2.00	0.26	0.14	1.86**
+Tax credit	0.25	0.13	1.92	0.25	0.14	1.79**
Total income	0.24	0.13	1.85	0.24	0.14	1.71**
After tax	0.22	0.11	2.00	0.22	0.13	1.69**
<b>30 to 34</b>						
Earnings	0.35	0.10	3.50	0.34	0.12	2.83**
Market income	0.33	0.10	3.30	0.32	0.12	2.67**
+Employment Insurance	0.25	0.10	2.50	0.26	0.11	2.36**
+Social assistance	0.21	0.10	2.10	0.23	0.11	2.09**
+Tax credit	0.21	0.10	2.10	0.22	0.11	2.00**
Total income	0.20	0.10	2.00	0.21	0.11	1.91**
After tax	0.17	0.09	1.89	0.19	0.10	1.90**
<b>35 to 39</b>						
Earnings	0.33	0.09	3.67	0.30	0.11	2.73**
Market income	0.31	0.09	3.44	0.29	0.11	2.64**
+Employment Insurance	0.23	0.09	2.56	0.22	0.10	2.20**
+Social assistance	0.20	0.09	2.22	0.20	0.10	2.00**
+Tax credit	0.19	0.09	2.11	0.19	0.10	1.90**
Total income	0.19	0.09	2.11	0.18	0.10	1.80**
After tax	0.17	0.08	2.13	0.16	0.09	1.78**
<b>40 to 44</b>						
Earnings	0.32	0.09	3.56	0.28	0.10	2.80**
Market income	0.30	0.09	3.33	0.27	0.10	2.70**
+Employment Insurance	0.22	0.09	2.44	0.21	0.10	2.10**
+Social assistance	0.19	0.09	2.11	0.19	0.10	1.90**
+Tax credit	0.18	0.09	2.00	0.18	0.10	1.80**
Total income	0.18	0.09	2.00	0.17	0.10	1.70**
After tax	0.16	0.08	2.00	0.15	0.09	1.67**
<b>45 to 49</b>						
Earnings	0.33	0.10	3.30	0.29	0.11	2.64**
Market income	0.28	0.09	3.11	0.25	0.10	2.50**
+Employment Insurance	0.22	0.09	2.44	0.20	0.10	2.00**
+Social assistance	0.19	0.09	2.11	0.18	0.10	1.80**
+Tax credit	0.19	0.09	2.11	0.17	0.10	1.70**
Total income	0.18	0.09	2.00	0.16	0.10	1.60**
After tax	0.16	0.08	2.00	0.15	0.09	1.67**

\*\* The bottom to top differences in 1999-2004 are positive and significant at the 1% level.  
Source: Statistics Canada, Longitudinal Administrative Databank

unattached women where relative instability is reduced by about 25 percentage points.

While the tax and transfer system considerably reduces the differences in instability in market income

between the bottom third and the top third, it generally does so to a greater extent among two-parent families and lone mothers than among unattached individuals. For instance, among two-parent fami-

lies with husbands aged 30 to 34, the difference in  $\overline{MAD}_i$  for market income amounted to 10 log points (0.22 versus 0.12) in 1999-2004 (Table 3). Taxes and transfers reduced that difference by 70% to 3 log points (from 0.13 to 0.10). For lone mothers aged 30 to 34, the reduction was 74% (Table 4), but only 53% for unattached women the same age (Table 6).

### Robustness checks

The main sample includes only families with positive earnings in all six years they were in the sample. The model assumes that the expected value of log earnings (or log income) is a linear function of an age polynomial. The main conclusions hold even if real earnings are used as the dependent variable.

The main question is whether the results can be generalized for a broader sample that includes those with zero annual family earnings.<sup>6</sup> The inclusion of zeros precludes the use of a log earnings model; the distribution of real earnings is not normal but the second model still produces consistent estimates as long as residuals are uncorrelated with age.

The main conclusions regarding recent trends in instability still hold. No widespread increase in earnings instability is evident in the past two decades. Most of the increases are observed among lone mothers 30 to 39 and unattached women. The earnings instability of lone mothers 40 and older, however, fell in both samples. This is an important confirmation of the main results since lone mothers probably have the highest fraction of families with zero annual earnings.

The broader sample model confirms that social assistance is by far the most important single factor



reducing relative (bottom third to top third) earnings instability among lone mothers. The federal Child Tax Benefit program and provincial family benefits also appear to play an important role. The tax system, on the other hand, reduces instability in absolute terms but often leads to higher relative instability.

For unattached individuals, the broader sample confirms that both EI and social assistance account for most of the reduction in relative instability. The broad sample shows a greater role for social assistance than the main sample—hardly surprising given that those with zero earnings are likely to depend more on social assistance than those who have positive earnings during the whole six-year period.

## Summary

This study analyzed trends in the earnings instability of lone parents and unattached individuals in the past two decades. It also examined the extent to which government transfers and the income-tax system reduce the differences in instability among lone parents and unattached individuals in different segments of the earnings distribution, and compared them with two-parent families.

As in a previous study (Morissette and Ostrovsky 2005), no strong evidence of a widespread increase in earnings instability in the past two decades was found. For example, while the earnings instability of younger couples (husbands aged 25 to 34) in the main sample increased, instability did not change for couples with husbands aged 35 to 44 and has dropped for older couples. Similarly, the earnings instability of unattached men dropped in all age groups, while that of unattached women rose in all but the youngest.

Lone mothers in the bottom third of the earnings distribution have the highest earnings instability; for those aged 30 to 34, it is twice that of two-parent families with husbands aged 30 to 34. As well, employment and earnings increases for young lone mothers have not kept pace with their older counterparts or married mothers (Myles, Picot and Myers 2006).

As for the role of government transfers and the tax system in smoothing employment income instability, the former play a particularly important role in reducing income instability. However, EI is more important for unattached individuals, while social assistance is especially important for lone mothers. And,

although income taxes reduce instability in absolute terms, they do not necessarily reduce the gap between earnings instability in the bottom and top third income groups.

Finally, it can be argued that a trade-off exists between stability and earnings; that is, some workers may accept greater instability for greater short-term compensation. For example, seasonal workers may be relatively well-compensated for short periods of work. Nevertheless, this study demonstrates that year-to-year instability is consistently higher in the lowest third of earners, regardless of population group. Thus long-term earnings instability is concentrated among those with low earnings, hindering their financial security and social inclusion.

## Perspectives

### ■ Notes

1 Less than \$375 weekly or less than \$10 per hour assuming a 37.5 hour workweek.

2 The low-income cut-off is the level at which a family spends 20 percentage points more of its before-tax, after-transfer income on basic necessities than the average family.

3 Formula for tests:

$$P(\hat{R} \geq 1) = 1 - P\left(z \geq \frac{\hat{R} - 1}{\sqrt{\hat{V}(\hat{R})}}\right), \text{ where}$$

$$\hat{V}(\hat{R}) \approx \frac{1}{\hat{\theta}_2^2} [\hat{V}(\hat{\theta}_1) + \hat{R}^2 \hat{V}(\hat{\theta}_2)],$$

$$\hat{R} = \frac{\hat{\theta}_1}{\hat{\theta}_2} \text{ and } \hat{\theta}_1, \hat{\theta}_2 \text{ are independent.}$$

4 For instance, for the 35-to-39 age group,  $\overline{MAD}_i$  dropped from 0.2 for market income to 0.13 for total income. Hence, the drop is  $[(0.2 - 0.13)/0.2] \times 100\% = 35\%$ .

5 For instance, for unattached men 35-to-39, the inclusion of EI and social assistance reduces relative instability from 2.64 to 2.00 or by  $[(2.64 - 2.00)/2.64] \times 100\% = 24\%$ .

6 A very small number of families reported single-digit annual earnings in some years. Annual earnings were set to zero if the amount in 2004 dollars was less than 20. Otherwise families who reported zero earnings in some years and positive but in fact zero earnings in other years (more than three) would have remained in the sample.

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# Training through the ages

Cathy Underhill

**L**ifelong learning is increasingly regarded as important to the health of the Canadian economy (Bélanger and Tuijnman 1997). Workplace developments such as rapid technological change, higher educational requirements, an increased emphasis on skill-based knowledge, and greater dependence on computers have led to a need for training entry-level workers as well as retraining older ones.

At the same time, Canada's population continues to age as the baby boomers move towards retirement (the oldest turn 60 in 2006). With the median age of retirement at 61 in 2005, the possibility of their impending exit from the labour force increases concerns for the supply of skilled labour. Facilitating later life learning could extend the contribution of older workers beyond the traditional age of retirement (Morissette, Schellenberg and Silver 2004).

At the workplace level, training is influenced by the degree of employer support given to employees: paying for training (directly or through reimbursement), allowing flexible hours, providing the course or program, or providing transportation to and from the training site.

In 2002, approximately 1 in 3 adults aged 25 to 64—five million people (Table 1)—participated in formal job-related training (see *Data source and definitions*). Using the 2003 Adult Education and Training Survey (AETS), this article compares the job-related training rate of older workers (55 to 64) with that of younger workers (25 to 34). Personal and job-related characteristics associated with training are examined for both groups, as are employer support, self-directed learning, barriers faced by older and younger employees, and the objectives and outcomes of training.

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**Table 1 Job-related training, 2002**

	Workers		Trainees		Job-related training
	'000	%	'000	%	%
<b>25 to 64</b>	<b>13,913</b>	<b>100.0</b>	<b>4,794</b>	<b>100.0</b>	<b>34.5</b>
25 to 34	3,734	26.8	1,531	31.9	41.0
35 to 44	4,443	31.9	1,529	31.9	34.4
45 to 54	3,887	27.9	1,310	27.3	33.7
55 to 64	1,849	13.3	424	8.9	22.9

Source: Statistics Canada, Adult Education and Training Survey, 2003

Logistic regression was used to determine the degree to which selected personal and job-related factors were related to the likelihood of participation in job-related training (see *Logistic regression*).<sup>1</sup> Models were run separately for employees aged 25 to 34 and 55 to 64. The factors selected were sex, education, household income, province, occupation, firm size, industry, employee or self-employed, sector (private versus public), and work schedule (full-time versus part-time). Most of the independent variables were selected on the basis of previous research on job-related training behaviour.

## Older women more likely than older men to engage in job-related training

Overall, women had slightly higher rates of job-related training than men in 2002. Even after holding other personal and job-related factors constant, the rate for women aged 55 to 64 was significantly higher (1.4 times) than for men the same age. In the 25-to-34 age group, men and women were equally likely to participate in training (Table 2).



## Data source and definitions

The 2003 **Adult Education and Training Survey** was conducted in February and March 2003 by Statistics Canada in partnership with Human Resources Development Canada. Some 34,000 adults aged 25 and over were asked about their training and education activities in 2002, including the number and duration of training activities, the type of training, and the involvement of the employer.

This article focuses primarily on two age groups: 25 to 34 and 55 to 64. Respondents were classified as working if they were employed or self-employed at some point during the 2002 reference year.

**Participants** are working individuals who participated in at least one formal job-related training activity during 2002.

**Formal job-related training** refers to courses or programs related to a current or future job. These had to follow a structured plan and lead to some form of recognition, certification, diploma or degree.

**Employer support** consists of one or more of the following: providing the training, paying for the training (either directly or by reimbursing the employee), allowing a flexible work schedule to accommodate training, or providing transportation to and from the training location.

A **program** is a series of courses leading to a degree, diploma or certificate, whereas **courses** include seminars, workshops and conferences as well as courses not part of a credit program.

Courses and programs were classified using the **Classification of Instructional Programs, Canada** (CIP Canada 2000), based on field of study. *Health, recreation and fitness* includes health professions and related clinical sciences; dental, medical and veterinary residency programs; and parks, recreation, leisure and fitness studies. *Personal improvement and leisure* includes basic skills, citizenship activities, health-related knowledge and skills, interpersonal and social skills, leisure and recreational activities, and personal awareness and self-improvement.

**Self-directed learning or informal job-related training** does not lead to formal qualification or certification, and generally does not rely on structured guidelines. It must, however, be undertaken by the participant with the intention of developing job-related skills or knowledge. Respondents were asked if they had done any of: seeking advice from someone knowledgeable, using the Internet or other software, observing someone performing a task, consulting books or manuals, or teaching themselves different ways of doing certain tasks. In contrast to formal job-related training, respondents were asked if they had engaged in any of these activities over the preceding four-week period, whereas formal job-related training questions referred to the entire year.

**Managerial and professional occupations** include not only senior management occupations; managers in retail trade, food and accommodation services; and other managers, but also professional occupations in business and finance; financial, secretarial and administrative occupations; natural and applied sciences and related occupations; professional occupations in health; nurse supervisors and registered nurses; occupations in the social sciences, government services and religion; teachers and professors; and occupations in art, culture, recreation and sport.

**Goods-producing industries** comprise agriculture; forestry, fishing, mining, oil and gas; utilities; construction; and manufacturing. **Service industries** comprise trade; transportation; finance, insurance, real estate, and leasing; professional, scientific, and technical services; education; health care and social assistance; information, culture and recreation; accommodation and food services; and public administration.

Given the complex nature of the survey design, bootstrap procedures were used to derive the variances for odds ratios and percentages.

## The highly educated get more training

Adult education, and in particular job-related training, appears to be accessed primarily by those who are already well-educated (SC-HRDC 2001).<sup>2</sup> In all age groups, higher levels of education corresponded with greater participation in formal job-related training.<sup>3</sup> For example, 55 to 64 year-olds with a university degree participated at nearly three times the rate of those with a high school diploma or less (37% versus 13%). This makes sense in that individuals with low initial levels of education are more likely to be employed in low-paying jobs, where investment in training is likely minimal. However, 55 to 64 year-olds with a university education still took less job-related training in 2002 than their younger counterparts aged 25 to

## Logistic regression

A logistic regression model is used to investigate the relationship between a discrete outcome and a set of explanatory variables. It allows the effect of one factor to be examined, while holding all others constant.

In this paper, logistic regression models were used to isolate the effect of various personal and job-related factors on the likelihood of participation in, and the likelihood of employer support for, job-related training.

Young adults (25 to 34) and older adults (55 to 64) were modelled separately for likelihood of job-related training. One model was used for all 25 to 64 year-old employees who had engaged in job-related training to examine employer support.

Responses of 'don't know/refused' were excluded.

**Table 2 Factors associated with job-related training for both older and younger workers**

	Job-related training			Odds ratios	
	25-64	25-34	55-64	25-34	55-64
	%				
Men (ref)	32.3	38.3	21.1	1.0	1.0
Women	37.0	44.1	25.3	1.0	1.4*
<b>Education</b>					
High school diploma or less	17.8	20.2	12.5	0.4**	0.5**
Postsecondary non-university (ref)	38.0	42.9	26.5	1.0	1.0
University	51.3	57.2	36.7	1.5**	1.2
<b>Household income</b>					
Less than \$30,000	24.1	35.7	12.9	1.0	0.6*
\$30,000 to \$59,999 (ref)	31.2	38.7	22.4	1.0	1.0
\$60,000 and over	45.0	51.4	33.7	1.4**	1.4
<b>Province</b>					
Newfoundland and Labrador	28.8	29.1	F	0.6*	F
Prince Edward Island	30.6	32.2	F	0.7	F
Nova Scotia	37.4	43.9	25.4	1.1	1.0
New Brunswick	34.4	43.2	F	1.2	F
Quebec	31.6	41.2	19.2	1.0	0.6*
Ontario	34.3	40.1	21.4	0.9	0.6*
Manitoba	38.4	48.0	26.9	1.5*	0.9
Saskatchewan	37.2	45.0	23.1	1.4	0.7
Alberta (ref)	34.6	38.7	27.7	1.0	1.0
British Columbia	38.6	43.4	29.0	1.2	0.9
<b>Occupation</b>					
Managerial, professional	46.2	53.2	32.0	1.3*	1.2
Clerical, sales, service (ref)	29.2	35.4	20.1	1.0	1.0
Blue-collar	22.5	28.3	14.1	1.0	1.2
<b>Firm size</b>					
Less than 20	24.9	29.8	13.2 <sup>E</sup>	0.6**	0.7
20 to 99	32.0	33.5	26.4	0.7*	1.3
100 to 500 (ref)	37.1	45.2	26.0	1.0	1.0
Over 500	43.6	48.6	34.0	1.0	1.5*
<b>Industry</b>					
Goods-producing (ref)	25.1	31.8	14.1	1.0	1.0
Service-producing	38.1	43.9	27.0	1.1	1.7*
<b>Self-employed</b>					
Yes (ref)	28.6	33.5	20.2	1.0	1.0
No	35.9	42.2	24.1	1.6**	1.0
<b>Sector</b>					
Private (ref)	28.1	35.6	17.2	1.0	1.0
Public	50.1	54.8	39.0	1.4**	1.6**
<b>Work schedule</b>					
Full-time	36.4	41.5	26.2	1.0	1.8**
Part-time (ref)	31.3	37.5	20.5	1.0	1.0

\* Significantly different from reference group at the 5% level.

\*\* Significantly different from reference group at the 1% level.

Note: Odds relative to reference group (ref).

Source: Statistics Canada, Adult Education and Training Survey, 2003

34 (37% versus 57%). One possibility is that older employees may be choosing to forgo training for personal reasons. Being close to retirement, for example, may cause them to be less interested in training related to career advancement.

With various personal and job-related characteristics held constant, lower levels of education were significantly associated with decreased odds of job-related training for both age groups. Those with a high school diploma or less were half as likely to participate as those with some postsecondary non-university education. However, a different story was evident for those with university education. Among those 25 to 34, the odds of taking training increased significantly, whereas for those aged 55 to 64, they did not.

### Higher household income associated with higher rates of job-related training

As with education, higher household income generally tends to be associated with higher rates of job-related training.<sup>4</sup> Training, especially when not supported by an employer, involves costs, either directly for tuition or books, or indirectly in forgone earnings. Higher income may therefore enable some workers to participate in training. When other characteristics are held constant, a higher household income significantly increased the odds of participation for both age groups. Conversely, the odds were significantly decreased for older but not younger employees with lower household income, relative to the reference group (medium income). Income appears to be related to job-related training only after a certain point for younger employees. They may



view training as a means of achieving a higher income, whereas this is unlikely to be a motivation for older employees given their proximity to retirement. The link between training and income likely goes in both directions; that is, while training may lead to higher incomes, higher incomes also allow employees to take advantage of training opportunities.

Although the training participation rates of 55 to 64 year-olds increased with income, their rates were consistently lower than all other age groups. For example, while the rate was around 50% for the three younger age groups earning \$60,000 or more, it was only 34% for those 55 to 64 (Chart A).

### Provincial differences in job-related training

Province of residence was significantly related to job-related training for both younger and older employees. Among younger ones, those in Newfoundland and Labrador were less likely than those in Alberta (reference group) to engage in training (.06), while those in Manitoba were 1.5 times more likely. As for older workers, those in Quebec and Ontario were less likely than those in Alberta to take training. The differences for older workers may be partly explained by differences in median retirement age. During the period 2000 to 2004, the median in Alberta was 63.7 compared with 61.4 and 59.9 in Ontario and Quebec respectively. Alberta's higher median retirement age suggests that older workers there may have a longer-term perspective on job-related training.

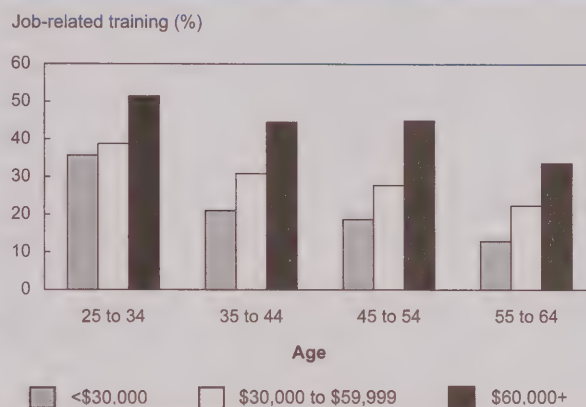
### Job characteristics affect the likelihood of training

For both younger and older workers, being in the public sector as opposed to the private sector significantly increased the odds of job-related training (1.4 and 1.6 times respectively).

Occupation was significantly related to being involved in training for younger employees, but not for older ones. Employees aged 25 to 34 in a professional or managerial occupation were 1.3 times more likely to take training than those in clerical, sales or service occupations.

Firm size was also clearly a factor. Smaller companies may have difficulty sparing resources for training when meeting the bottom line is a priority (Leckie et al. 2001). On the other hand, large firms (more than 500 employees) are more likely to be in a position to pro-

**Chart A Higher household income levels not as much related to job-related training for older employees as for younger ones.**



Source: Statistics Canada, Adult Education and Training Survey, 2003

vide support. Being employed in a smaller firm (less than 20, or 20 to 99 employees) significantly lowered the odds of job-related training (0.6 and 0.7 respectively) for younger workers relative to a medium-sized firm; however, no relationship was apparent for older workers. On the other hand, employment in a larger firm (more than 500 employees) significantly increased the odds of job-related training for older workers, but made no difference for younger workers.

Industry was a significant factor for older employees, along with work schedule. Employment in a service industry rather than a goods-producing one significantly increased their likelihood of participation, while not being significantly related for younger workers. Similarly, working full time rather than part time increased the odds of participation for older employees, but had no effect for 25 to 34 year-olds. Self-employment, on the other hand, had no effect for older workers but significantly affected the likelihood of participation for younger workers.

Perhaps surprisingly, union membership was not a significant factor in job-related training. A previous study found that unions had only weak direct effects on training incidence and funding. However, unions may exert positive indirect effects by encouraging employer funding of training, which could then lead to increased job stability (Gilbert 2003).



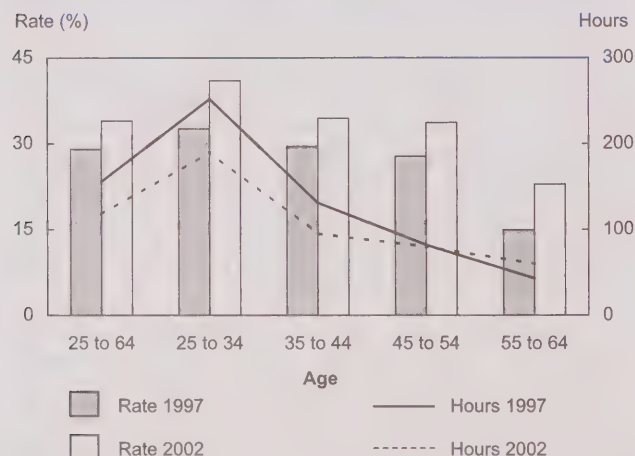
## Older adults spend less time in training

Formal job-related training can take the form of either individual courses or full programs of study leading to a degree, diploma or certificate. Courses are not necessarily undertaken for credit reasons and can include seminars, workshops or conferences. The majority of employed adults engaged in job-related training in 2002 took courses as opposed to programs (76% versus 15%). Less than 10% took both.

Overall, participants averaged 118 hours of job-related training in 2002, compared with 156 hours in 1997 (Chart B).<sup>5</sup> This drop is attributable mainly to trainees aged 25 to 44, as the intensity of training for those aged 55 to 64 increased by nearly 40%, from 43 to 60 hours. Major differences were apparent by age. Compared with 55 to 64 year-old trainees, those 25 to 34 spend triple the time in job-related training in 2002 (190 versus 60 hours). This makes sense given that older employees have had longer to accumulate not only general work skills but also job-specific skills. In addition, many older employees may be winding down before retirement.

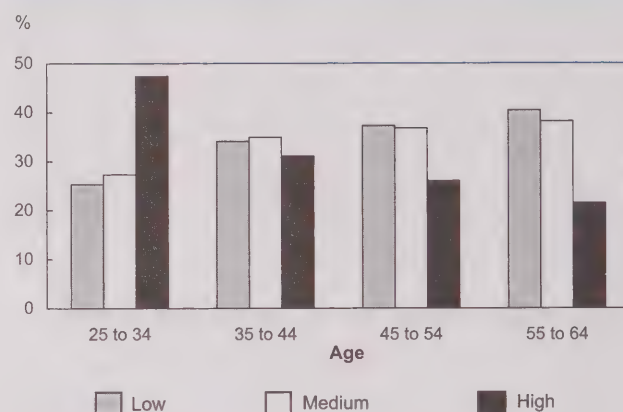
Another approach to training intensity is to divide training hours into three roughly equal categories: high, medium, and low (Chart C).<sup>6</sup> Less than one-quarter of

**Chart B Older participants increased both their rate and hours of training, younger ones only their rate**



Source: Statistics Canada, Adult Education and Training Survey, 2003

**Chart C A greater proportion of younger workers are in the high-intensity training category**



Source: Statistics Canada, Adult Education and Training Survey, 2003

55 to 64 year-olds (21%) were in the high-intensity category (more than 11 days) in 2002, compared with nearly half (47%) of younger participants.

## Types of training differed for older and younger adults

The participation rates of older and younger adults varied depending on the type of training (Table 3). For all age groups, the most common was in business, management, and public administration and related fields (close to 30%). Older workers were more likely than younger ones to take training in math, computer, and information sciences (19% versus 13%), perhaps indicating more of a need to upgrade computer skills. Older workers also trained more often in health, recreation and fitness (22% versus 15%). On the other hand, a larger proportion of younger participants reported being involved in job-related personal improvement and leisure training (17% versus 11%).

## Improving performance main motivator for all ages

Individuals may have multiple objectives for taking job-related training. The primary motivation for the vast majority was to do their job better (Chart D). This was particularly so for older workers (84% compared with 71% for younger employees). Different

**Table 3 Participation rate in training activities**

	25 to 64	25 to 34	35 to 44	45 to 54	55 to 64
	%				
Business, management and public administration	30.4	27.4	32.0	32.4	29.6
Mathematics, computer and information sciences	16.0	12.7	15.5	19.6	18.5
Health, recreation and fitness	15.5	14.9	13.6	16.0	22.3
Personal improvement and leisure	15.4	16.6	16.2	14.4	11.0
Architecture and engineering	14.2	14.9	15.0	12.2	14.6

Note: Participants could report more than one type of training activity.  
Source: Statistics Canada, Adult Education and Training Survey, 2003

objectives highlight different career stages. For example, the second most common motivation for older participants was to avoid losing their job (14%), whereas for younger ones, it was to help them find or change jobs (33%). Although increasing income was the third most cited objective for both, it was much more important for 25 to 34 year-olds—nearly 3 in 10 compared with 1 in 10 aged 55 to 64.

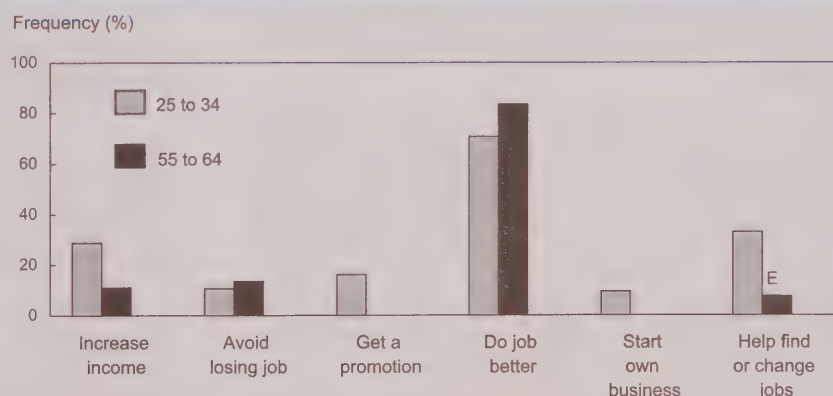
To a large degree, stated training objectives and outcomes corresponded, particularly for older participants. For example, 91% of 55 to 64 year-olds who wanted to do their job better achieved this objective, compared with 86% of those aged 25 to 34. For older participants, training seems to have a slightly bigger payoff in terms of financial objectives and job stability. For example, more than half of 55 to 64 year-olds who wanted to increase their income felt satisfied, compared with 40% of those aged 25 to 34. For those whose objective was to keep their job, 79% of older workers were successful compared with 68% of younger ones.

### Employer support higher for job-related courses than for programs

Seven in 10 employed adults who took job-related training in 2002 received employer support of some type (see *Data source and definitions*). Full programs require a greater investment on the part of

the employer than individual courses and may affect the degree of support. A course can be completed within a relatively short time frame, while a program generally takes longer and costs more. In addition, the cost of replacing an employee absent from their job is much lower for a course than for a program. In fact, employer support was much greater for courses (76%) than for programs (47%). However, support was significantly lower for 55 to 64 year-old employees in job-related courses (68%) than for those aged 25 to 34 (78%).

In order to determine the degree to which selected factors were related to employer support, a logistic regression model was run for 25 to 64 year-old employees with job-related training in 2002. The final model used age, education, household income, occupation, job tenure, union membership, and work schedule (full-time or part-time).

**Chart D Doing a better job was the key motivator for all participants regardless of age**

Source: Statistics Canada, Adult Education and Training Survey, 2003



**Table 4 Factors associated with employer-supported training**

	Employer-support	Odds ratios
	%	
<b>Age</b>		
25 to 34	69.9	1.0
35 to 44 (ref)	74.7	1.0
45 to 54	72.6	0.7*
55 to 64	68.0	0.7
<b>Education</b>		
High school or less	72.3	1.2
Postsecondary non-university (ref)	72.6	1.0
University	71.0	0.7**
<b>Household income</b>		
Less than \$30,000	52.3	0.6**
\$30,000 to \$59,999 (ref)	72.3	1.0
\$60,000 and over	78.3	1.4**
<b>Occupation</b>		
Managerial, professional	75.4	1.3
Clerical, sales, service (ref)	67.6	1.0
Blue-collar	69.4	0.9
<b>Job tenure</b>		
One year or less	55.3	0.5**
1 to less than 5 years (ref)	75.9	1.0
5 to less than 20 years	76.6	0.9
20 years and over	80.8	1.1
<b>Union coverage</b>		
Union	85.7	3.8**
Non-union (ref)	81.0	1.0
<b>Work schedule</b>		
Full-time	76.8	2.7**
Part-time (ref)	55.9	1.0

\* Significantly different from reference group at the 5% level.

\*\* Significantly different from reference group at the 1% level.

Note: Odds relative to reference group (ref).

Source: Statistics Canada, Adult Education and Training Survey, 2003

### Older employees and the university educated less likely to receive employer support for training

Relative to the reference group (35 to 44), the odds of receiving employer support for job-related training were significantly lower (0.7) for older employees (45 to 54 and 55 to 64), whereas younger employees (25 to 34) were equally likely to receive support (Table 4).

Those with a university education were significantly less likely to receive support (0.7) than those with some postsecondary, non-university education.

### Low household income reduced odds of employer support, high income increased them

Employees with the lowest income (less than \$30,000) reported the lowest employer support for training. Household income affected the odds in two ways: Low income (less than \$30,000) relative to medium income (\$30,000 to \$59,999) reduced the odds by almost half (0.6). On the other hand, high income (\$60,000 or more) increased the odds nearly 1.5 times.

### Job status and union membership associated with employer support

Longer job tenure was generally associated with higher rates of employer support for training. Employees with one year or less were only half as less likely to receive support as those who had been employed for longer (more than one year but less than five).

Work schedule also clearly made a difference. Employers tended to favour full-time employees when it came to providing support for training. Their odds of employer support were more than two and a half times those working part time. The difference is hardly surprising. For one thing, a part-time employee obviously has less time to devote to on-the-job training. Employers may also be concerned about retaining part-timers and consequently be reluctant to invest in training.

For union members, the likelihood of receiving employer support for training was 3.8 times higher than for non-union members. This lends credence to the idea that unions may have indirect effects on training incidence by encouraging employer support (Gilbert 2003).

### Training barriers similar for older and younger workers

Barriers to job-related training can be situational (too busy), institutional (tuition costs or inconvenient scheduling), or attitudinal (personal views about learning) (Cross 1981). The 2003 AETS dealt only with situational and institutional barriers.

Among trainees who did not take additional needed or wanted training in 2002, the training rates were similar for the three youngest age groups (46% to 48%) (Chart E). Although the training rate was higher among



55 to 64 year-olds with unmet training needs (36%) than for all 55 to 64 year-old trainees (23%), it still lagged behind other age groups. Older participants do not seem to feel unfairly treated with respect to job-related training opportunities. Indeed, a higher proportion of 25 to 34 year-old participants felt they had unmet training needs (27% versus 19%).

Among those who needed or wanted more training but did not receive it, expense was the most common reason given, being an issue for one-third of 55 to 64 year-olds and close to half of younger participants. The second was being too busy at work, cited by roughly one-third of both the youngest and oldest groups. These two barriers were also the most important in 1997.<sup>7</sup> Equally important (and the third most common) for both older and younger participants was conflict with work schedule, with more than one-third of each age group giving this reason.

## Conclusion

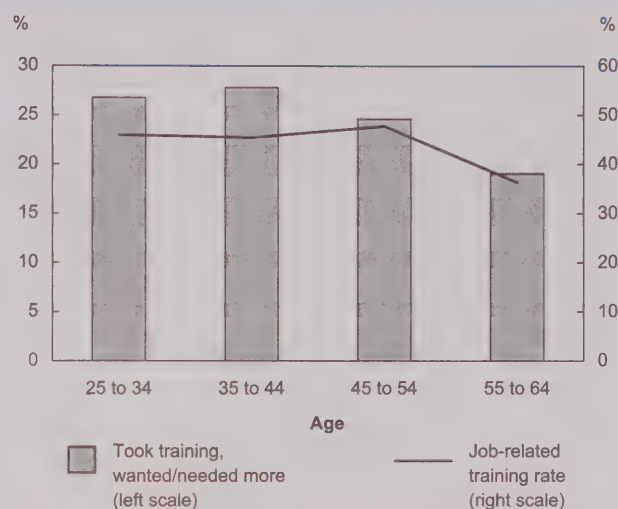
In 2002, fewer older workers (55 to 64) than younger workers (25 to 34) engaged in formal job-related training. One possible explanation for the lower rate among older workers may be found in the 'return-to-investment' hypothesis, which originated in an economic context in the 1960s. According to the theory, education and training can be considered an investment in human capital (Becker 1962), so training at a later age may not yield the same degree of return as at an earlier age—simply because of the shorter period over which the return can be realized.

Another reason may be that older employees simply lack the confidence to initiate or engage in training opportunities because of negative attitudes or stereotypes towards older workers and their ability to learn new skills (Maurer 2001). Another possibility, however, is that older workers do not see the value in investing time in training, given that they may soon be leaving the labour market.

Nevertheless, more older employees took part in job-related training than in 1997, and in addition, they did more of it. Older trainees increased their training hours by nearly 40% between 1997 and 2002 (Peters 2004).

Higher levels of education appear to predispose employees to engage in job-related training. This educational advantage may be due in part to the types of jobs held by employees, which are primarily a product of their education. For example, an investigation

**Chart E Job-related training rate relatively stable across ages among those who wanted or needed more training**



Source: Statistics Canada, Adult Education and Training Survey, 2003

of the job mobility of low-wage workers found that those with a university education were more likely to have higher paid employment after five years than those with high school education or less (Janz 2004). A greater proportion of older adults may well be involved in job-related training in the future, since the baby-boom generation has generally higher levels of education than previous generations.

For both younger and older employees, higher levels of household income, being employed in the public sector, and working for larger firms increased training rates. In addition, occupation made a difference for younger workers: Professionals and managers had a greater likelihood of job-related training. Being a woman, working full time, and working in a service industry increased the likelihood of job-related training for older workers.

For most participants, improving job performance was the main objective for taking training. In addition, both younger and older participants hoped to increase their income. However, older participants were more concerned about holding on to their jobs, whereas younger trainees were looking to find or change jobs.

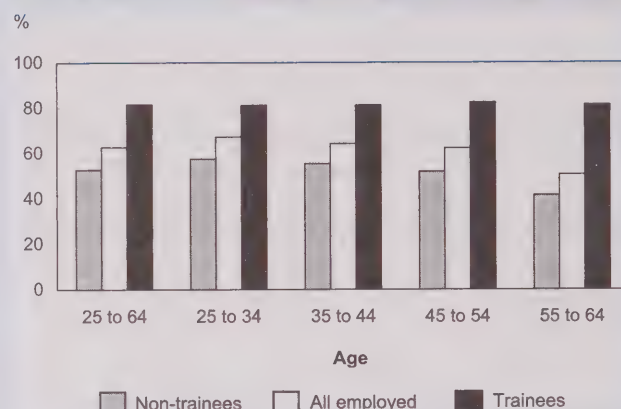
## Self-directed learning rates highest among those taking formal job-related training

Formal courses or programs are not the only ways of learning. Another option is self-directed or informal training, which can take different forms (see *Data source and definitions*). Workers were asked about five self-directed activities: seeking advice from someone; using the Internet or computer software; observing someone perform a task; consulting books, manuals or other documents; and self-teaching via different methods.

Nearly two-thirds (63%) of all adult employees engaged in some form of self-directed learning in 2002 (Chart). As with formal training, self-directed learning tended to be less common for older workers, being cited by just over half of those aged 55 to 64 compared with two-thirds of those 25 to 34. Training participants had substantially higher rates of self-directed learning than non-participants across all age groups (82% versus 53% overall). Among non-participants, those aged 55 to 64 had a lower rate (42%) than those aged 25 to 34 (58%).

More than two-thirds of training participants consulted books or manuals, or self-taught using different methods. Older trainees were less likely than those aged 25 to 34 to observe someone perform a task (35% versus 45%). Learning by seeking advice was also less common for older participants (38% versus 51%). Older and younger participants were equally likely to use the Internet, con-

Self-directed rates by age



Source: Statistics Canada, Adult Education and Training Survey, 2003

sult books and manuals, and self-teach. However, those 55 to 64 reported lower levels of engagement in all types of self-directed learning.

The majority of both younger and older participants who desired to improve job performance achieved their goal.

Nearly three-quarters of those who engaged in job-related training in 2002 received employer support (72%). With the growing importance of lifelong learning, employer support may be an important incentive, particularly for older employees. However, older employees appear to have been at a disadvantage compared with younger employees. Whether this was due to negative attitudes on the part of the employer or reluctance on the part of older employees to engage in training is difficult to say. For example, a significantly higher proportion of 25 to 34 year-old participants reported unmet training needs than their counterparts aged 55 to 64. This seems to indicate that older participants have been satisfied with their training opportunities.

Education, household income, job tenure, work schedule and union membership also influenced employer support. Employees with a university education were less likely to receive support than those with only some postsecondary (non-university) education. Lower household income was also associated with a reduced

likelihood of employer support. On the other hand, employees with longer tenure tended to be more likely to receive support for training, as were full-time employees, and those who were union members.

Clearly, training opportunities are not equally distributed. Those who are younger and more highly educated, for example, tend to participate in job-related training at a higher rate. However, those who are educationally disadvantaged likely stand to gain more when they are given the opportunity for training. Indeed, although the least educated are less likely to participate in training, they are the most likely to benefit (Myers and Myles 2005).<sup>8</sup>

### Perspectives

#### Notes

1 Variables not significantly associated with the likelihood of engaging in job-related training, such as marital status and union membership, were dropped.

2 These results correspond with findings from other surveys. For example, the 2001 Workplace and Employee Survey found a similar link between level of education and engagement in training, either in the classroom or on the job (Leckie et al. 2001).



3 The relationship between education and training has been established elsewhere. For example, see OECD (2003), de Broucker (1997), Tuijnman and Boudard (2001), Statistics Canada (2001).

4 Household income was used rather than individual earnings since it can be argued that the decision to participate in training can be a household decision for couples. In addition, an earlier model with earnings showed similar results, with the exception of some small differences: a reversal of the pattern of significance by province and also by sector, which was not a significant factor for 55 to 64 year-olds with earnings in the model. Household income was divided into three categories: low (less than \$30,000), medium (\$30,000 to \$59,999), and high (\$60,000 or more).

5 Data comparability between 1997 and 2002 may be affected by differences in the way respondents were asked to report job-related training activities. For more information, see Peters (2004).

6 Those in the lowest category took between 1 and 20 hours of training (up to 3 days); those in the medium category, between 21 and 65 hours (3 to 11 days); and those in the highest category, in excess of 65 hours (11 to 260 days), based on a 6-hour training day.

7 Sussman (2002) included both training participants and non-participants, but excluded full-time students. The current study, however, includes participants but excludes non-participants, and includes full-time students who were employed at some point during 2002. In addition, the question that asked about job-related training in 1997 focused on needs rather than both needs and wants as in 2002.

8 This finding was based on self-reported positive outcomes of training.

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# Balancing career and care

Wendy Pyper

**J**ust as the responsibility of raising children is lifting, many families face a new challenge—providing care to aging parents, relatives or friends. In 2002, over 1.7 million adults aged 45 to 64 provided informal care to almost 2.3 million seniors with long-term disabilities or physical limitations (Stobert and Cranswick 2004). While seniors receive some help from formal sources such as agencies, organizations or paid individuals, almost three-quarters of the hours spent assisting them are provided by a network of family and friends (Lafrenière et al. 2003). This informal support system may be sufficient to delay their entry into care institutions.

Most informal providers of elder care are also in the labour market. In 2002, 70% of caregivers aged 45 to 64 were employed.<sup>1</sup> Many of these were women, who traditionally have provided much of the caregiving in our society. With the employment rate for women increasing substantially in the past two decades (from 44% in 1985 to 64% in 2005 for women aged 45 to 64) and concerns about labour shortages in the future, it is looking more likely that many men and women in this age group, particularly the upper end, will be pulled in two directions. The expectation may be not only to continue working, but also to act as caregiver for extended periods as life expectancy increases. At the same time, combining a heavy workload, family support and day-to-day tasks may lead to fatigue or quitting a job earlier than expected (Pitrou 2005).

Successfully combining elder care with employment requires a certain amount of juggling. The catchphrase ‘work–life balance’ refers to the many time demands that can “drain our energy, affect our health and undermine our productivity.” (Hunsley 2006, 3). While the prevalence of caregiving and working provides a good starting point in the discussion of work–life balance, it does not shed any light on the amount of time

spent on elder care or paid employment. In the same way that working longer hours relates to the time crunch faced by many, so too does the degree or intensity of caregiving. While previous studies have examined the incidence and impact of providing elder care (Habtu and Popovic 2006, Cranswick and Thomas 2005, Stobert and Cranswick 2004, Williams 2004, among others), little focus has been placed on the multidimensional aspects of demands on time. This article uses the 2002 General Social Survey (GSS) on aging and social support to examine the prevalence and impact of caregiving among middle-aged Canadians, looking at the hours they spend in both paid work and informal care of seniors.

## The two sides of intensity

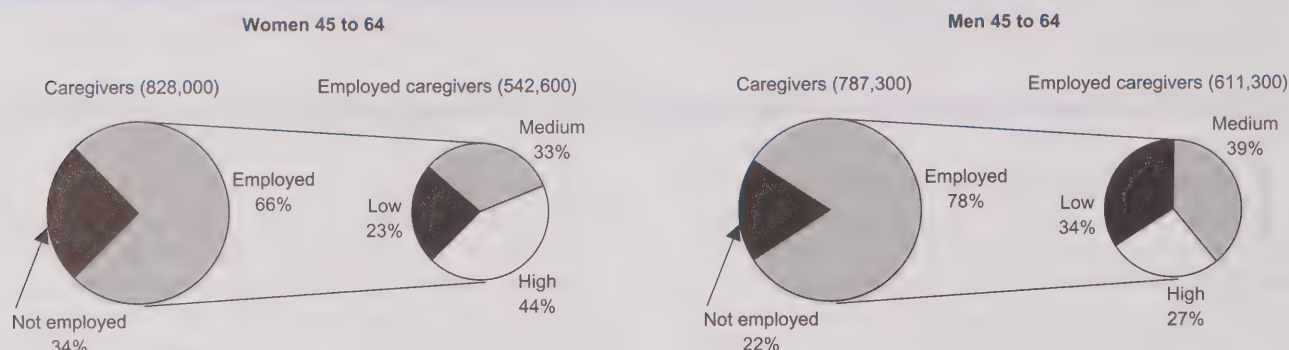
In 2002, some 1.2 million employed people aged 45 to 64 provided informal care to seniors with long-term conditions or disabilities (see *Data source and definitions*).<sup>2</sup> Just under half of these caregivers were women (Chart A). Most were between 45 and 54 (71%), married (78%), without children under 18 living at home (75%), and living in an urban area (75%) (Habtu and Popovic 2006).

Caregiving may entail occasional or regular assistance, and can include a wide array of activities. Helping inside the home includes meal preparation or cleaning; help outside the home includes house maintenance or cutting the lawn. Assistance with transportation, shopping and bill paying is often required. Tasks may also include personal care, such as bathing, toileting or dressing.

The median number of hours per week spent by caregivers in carrying out their tasks was 2.0, with women providing significantly more hours than men (3.0 versus 1.6).<sup>5</sup> To analyze the hours spent on elder care, women and men were divided into three categories of caregiving intensity.

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**Chart A Caregiving men are more likely than women to be employed; they are also more likely to be low-intensity caregivers**

Source: Statistics Canada, General Social Survey, 2002

Of the employed men who provided elder care, one-third (34%) spent an average of one hour or less per week (considered low intensity), compared with 24% of women. On the other hand, their female counterparts were more likely to be high-intensity caregivers (four or more hours per week)—44% versus 27%.

Some 80% of women caregivers who were employed usually worked 40 hours or less per week, with the rest working longer (Table 1).<sup>6</sup> In contrast, 53% of their male counterparts worked 40 hours or less, and 47% worked longer. Regardless of the intensity of caregiving, employed men were more than twice as likely as women to be working longer hours.

Some of these individuals are no doubt stressed because of conflicting demands on their time. Looking at the relationship between hours spent on paid work and caregiving will help address the issue of work-life balance for workers in the 45-to-64 age group.

### Social activities and work-life balance

Caring for seniors can lead to changes in social activities, holiday plans or sleep patterns as well as extra expenses. These factors have

been used to construct a socio-economic well-being index.<sup>7</sup> The majority of low-intensity caregivers felt little or no socio-economic consequences, with only 1 in 5 women and 1 in 6 men reporting substantial effects (two or more of the four) (Chart B). Furthermore, work intensity appears to have no relevance for these low-intensity caregivers. However, high levels of caregiving hours resulted in substantial consequences for more than 50% of all women caregivers, regardless of the number of hours of paid work.

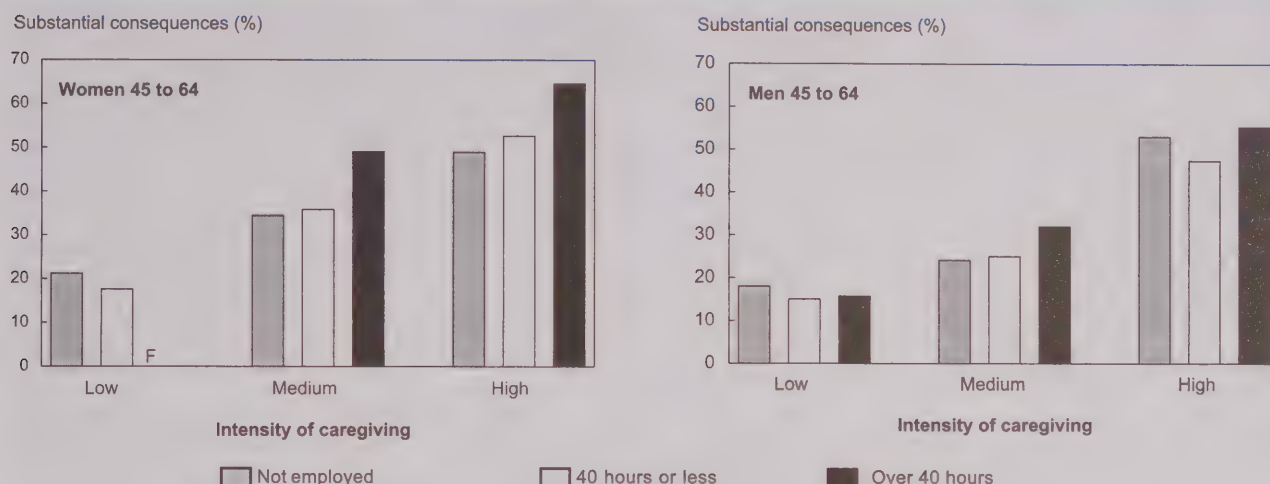
**Table 1 Employment and caregiving intensity**

Aged 45 to 64	Caregivers	Intensity of caregiving		
		Low	Medium	High
<b>Women</b>	828	188	273	367
		'000		
		%		
Not employed	34	32	35	35
Employed	66	68	65	65
40 hours or less	80	85	78	79
Over 40 hours	20	15	22	21
<b>Men</b>	787	265	301	221
		'000		
		%		
Not employed	22	20	21	27
Employed	78	80	79	73
40 hours or less	53	55	49	56
Over 40 hours	47	45	51	44

Source: Statistics Canada, General Social Survey, 2002



**Chart B More socio-economic consequences<sup>1</sup> for high-intensity caregivers, especially for those who work longer hours**



<sup>1</sup> Changes in social activities, holiday plans, or sleep patterns; extra expenses.  
Source: Statistics Canada, General Social Survey, 2002

Women working longer hours were more likely to feel socio-economic consequences. For example, among women providing four hours or more of caregiving per week, 65% of those who worked longer hours reported substantial consequences, compared with 49% of those not employed. Interestingly, women combining longer work hours with medium levels of caregiving reported consequences similar to those who provided more caregiving hours but were not employed (roughly half).

For most combinations of caregiving and employment, men felt fewer socio-economic consequences than women, although generally the patterns were similar.

### Many make employment-related changes as a result of their caregiving tasks

Respondents were asked if caregiving had caused them to reduce the hours they worked, change their work patterns, or turn down a job offer or promotion. They were also asked if caregiving had caused a postponement in education or training, or a reduction in income.<sup>8</sup> When the employment changes are combined into an index, caregivers providing relatively few hours of care per week were the least affected; at least three-

quarters of women and an even higher proportion of men reported no job-related changes (Table 2).

Those providing between one and four hours of care per week experienced job-related changes more often. Among this group, 37% of women and 24% of men who were working over 40 hours were substantially affected (between one and three job-related effects). When higher degrees of caregiving and employment were combined, the percentage rose to 65% for women and 47% for men. Clearly, individuals who combined high levels of caregiving with paid employment had to make adjustments in their job.

### Feelings of guilt common

To measure feelings of guilt arising from lack of time or inability, caregivers were asked if they felt they should be doing more to help or if they felt they should be doing a better job. Over 40% of the women reported substantial feelings of guilt (Chart C). For those in the medium- and high-intensity range, more hours of work were associated with a greater feeling of guilt—roughly 6 in 10 of those working over 40 hours reported higher levels. This is not surprising, since longer work hours may be preventing these women from doing as much caregiving as they would

**Table 2 Employment changes index<sup>1</sup> by caregiving and work intensity**

	Women 45 to 64		Men 45 to 64	
	None	Substantial	None	Substantial
<b>Intensity of caregiving</b>	%			
<b>Low</b>				
Not employed	89	F	96	F
40 hours or less	83	14	90	F
Over 40 hours	76	F	85	15
<b>Medium</b>				
Not employed	84	14	91	F
40 hours or less	71	27	84	15
Over 40 hours	62	37	76	24
<b>High</b>				
Not employed	72	25	81	17
40 hours or less	52	44	68	28
Over 40 hours	35	65	50	47

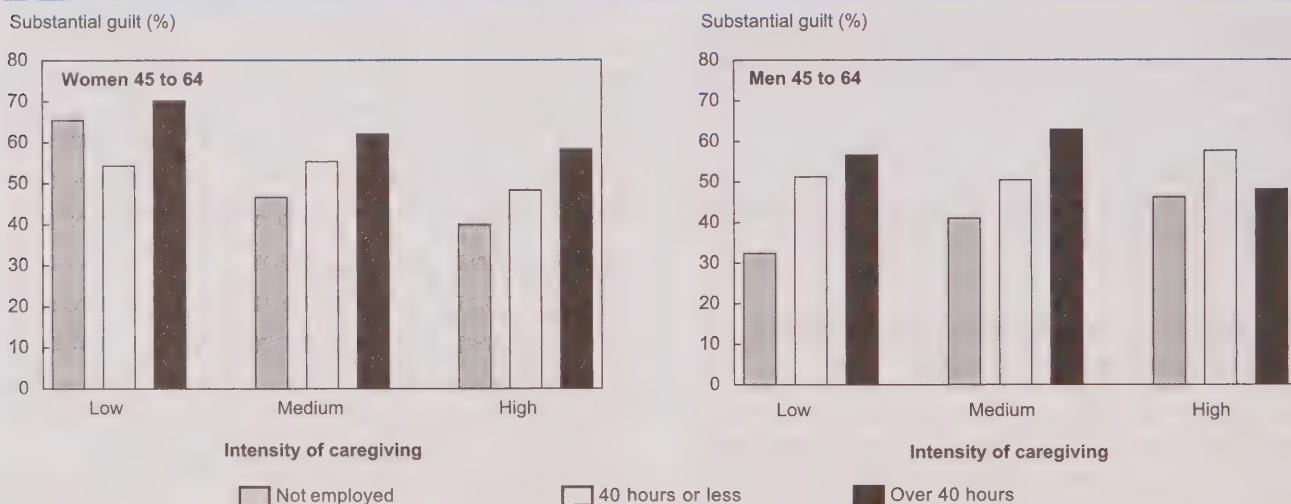
<sup>1</sup> Reduced work hours, changed work patterns, turned down a job offer or promotion, postponed education or training, suffered a reduction in income.

Source: Statistics Canada, General Social Survey, 2002

pared with 40% of high-intensity caregivers. Even among those providing many hours of caregiving and working longer hours, 58% reported substantial guilt levels. Interestingly, women who provided relatively few hours of care but who worked longer hours had the highest proportion with substantial guilt feelings (7 in 10).

Not surprisingly, for men caregivers in the low- and medium-intensity categories, longer work hours were associated with higher levels of guilt. Among the low-intensity group, 57% of those who worked longer hours felt substantial guilt, almost twice the rate of those not employed. In general, working longer hours was associated with increased guilt feelings among both men and women, but on average, men felt guilty to a lesser degree.

like. Furthermore, for any level of work intensity, guilt levels tended to be greater for lower amounts of caregiving. Among women not employed, 65% of low-intensity caregivers indicated feeling substantial guilt, com-

**Chart C Working longer hours is often associated with higher levels of guilt<sup>1</sup>**

<sup>1</sup> Should be doing more or a better job.

Source: Statistics Canada, General Social Survey, 2002



## Data source and definitions

The 2002 **General Social Survey Cycle 16: Survey on Aging and Social Support** covered persons aged 45 and over in private households in the 10 provinces. For this article, persons aged 45 to 64 were selected. Individuals were categorized by their employment intensity and their caregiving intensity. Those with missing information for main activity, employment or caregiving hours were excluded.

**Not employed:** Main activity in the last 12 months was anything other than working at a paid job or business (for example, retired or looking for work)

**Employed:** Main activity in the last 12 months was working at a paid job or in self-employment. The employed were further split into two categories: those who worked **40 hours or less** at all jobs and those who worked **over 40 hours**.

**Caregivers** provided informal care to someone 65 or over with a long-term illness or disability. Caregivers were further categorized by the time spent doing one or more of the following: duties inside the house, duties outside the house, transportation, or personal care. Respondents reported the average number of hours spent on each of these activities over the previous 12 months, and these hours were combined and converted into an average number of hours per week. The caregiving population was then divided roughly into thirds: **low-intensity:** up to one hour per week; **medium-intensity:** between one and four hours; **high-intensity:** four hours or more.

Various indexes were calculated, based on the impact of caregiving questions.<sup>3</sup> Responses of *always*, *sometimes* or *never*, were given values of 2, 1 and 0 respectively. Yes and no responses were given values of 2 and 0 respectively.<sup>4</sup> To create the index, the values for each question were added together.

### Socio-economic index

"Looking back over the past 12 months, has assisting persons over the age of 65 caused you to make changes in social activities, make changes in holiday plans, change sleep patterns, have extra expenses?"

The maximum value was 4. Values of 0 to 1 are referred to as *little or no* while values between 2 to 4 are referred to as *substantial*.

### Employment changes index

"Looking back over the past 12 months, has assisting persons over the age of 65 caused you to reduce hours worked, change work patterns, turn down a job offer or promotion, postpone education or training, suffer a reduction in income?"

The maximum value was 5. Values of 0 are referred to as *none*, between 1 and 3 as *substantial*, and 4 or 5 as *severe*. While respondents were asked if they had quit their job because of caregiving, this was not included in the index because it is a drastic move, not equivalent to the other factors in this index, and the sample size is insufficient to analyze the question separately.

### Guilt index

"How often do you feel you should be doing more for the people you help, or feel you could do a better job?"

The maximum value was 4. Values of 0 to 1 are referred to as *minimal*, and those over 2 as *substantial*.

### Burden index

"Looking back over the past 12 months, has assisting persons over the age of 65 caused your health to be affected? How often do you feel that because of the time you spend helping people that you don't have enough time for yourself, feel angry when you are around the person(s) you are helping, wish that someone else would take over your helping responsibilities?"

The maximum value was 8. Values between 0 and 2 are referred to as *little or none*, and those between 3 and 8 as *substantial*.

Cells have been marked for quality, based on calculated CV using the bootstrap technique. Only statistically significant differences are discussed in the text.

## Burden linked more to caregiving intensity than employment intensity

To measure caregiver burden, respondents were asked if caregiving had affected their health, led to not having time for themselves, or made them wish someone else would take over caregiving responsibilities. Respondents were also asked how often they felt angry when they were around the care receiver. When these measures of burden were combined into an index, it was clear that those providing lower amounts of care were less burdened (Table 3).<sup>9</sup> The vast majority of those providing up to one hour of care per week had low burden levels, regardless of the hours spent in

paid employment (over 86% of women and over 94% of men). With increased hours of care, the proportion experiencing substantial burden also increased, regardless of employment intensity. Among women who provided over four hours of care, 31% of those not employed and 40% of those working longer hours experienced substantial burden. Indeed, among those with the same work intensity, the higher the caregiving intensity, the more likely they were to report substantial burden levels. Among women who worked 40 hours or less, only 10% of low-intensity caregivers felt substantially burdened, compared with 44% of high-intensity caregivers.



**Table 3 Caregiver burden index<sup>1</sup> by caregiving and employment intensity**

	Women 45 to 64		Men 45 to 64	
	Little or none	Substantial	Little or none	Substantial
<b>Intensity of caregiving</b>	%			
<b>Low</b>				
Not employed	86	14	97	F
40 hours or less	90	10	94	F
Over 40 hours	89	F	96	F
<b>Medium</b>				
Not employed	80	20	94	F
40 hours or less	80	20	94	F
Over 40 hours	70	30	91	F
<b>High</b>				
Not employed	69	31	85	15
40 hours or less	56	44	82	18
Over 40 hours	60	40	85	F

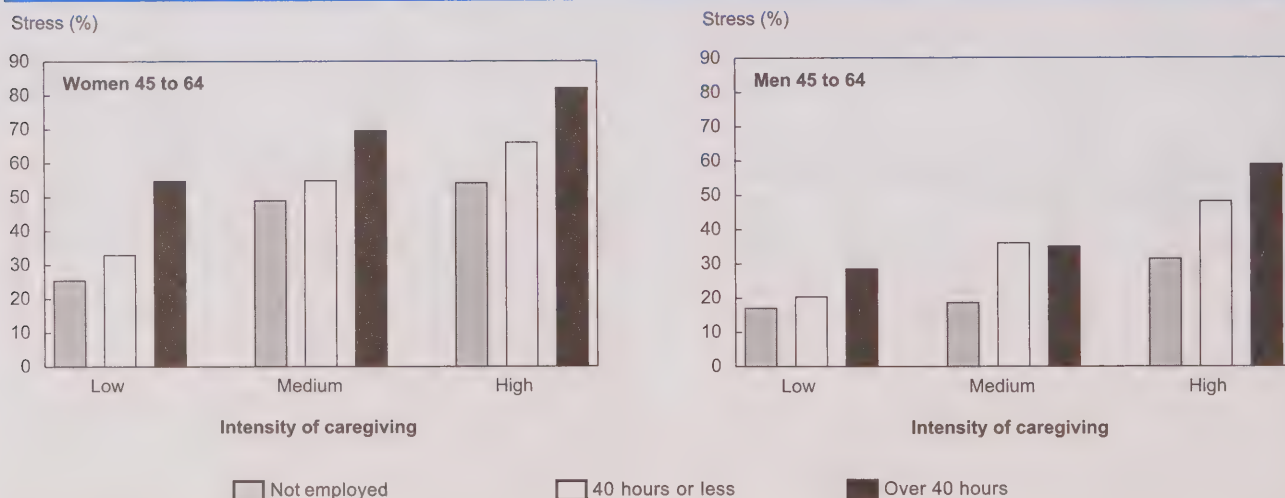
1 Caused health to be affected, lacked time for self, felt angry when around the person(s) being helped, wished someone else would take over helping responsibilities.

Source: Statistics Canada, General Social Survey, 2002

provided no more than one hour of elder care per week, fully one-quarter sometimes or nearly always felt stressed dealing with both caregiving and other commitments (Chart D). However, those who were working (whether shorter or longer hours) were more likely to feel this way (33% and 55% respectively). Indeed, for each caregiving intensity level (for all women and some men), longer work hours were associated with higher proportions of stress. For women in the high-intensity caregiving group, 54% of those not employed and 82% of those working longer hours reported sometimes or nearly always feeling stressed balancing their responsibilities. While men showed a similar pattern, they generally reported stress less often than women. This may reflect other pressures on women, such as dealing with children or other unpaid household tasks (Williams 2004; Marshall 2006).

### Longer work hours make juggling difficult

To measure work-life balance, respondents were asked how often they felt stressed between helping others and trying to meet other work or family responsibilities. Even among women not employed who

**Chart D Juggling eldercare, work and family responsibilities can be stressful**

Source: Statistics Canada, General Social Survey, 2002

## Easing the strain

Respondents were asked what would be most useful in allowing them to continue helping others. Occasional relief was most often included in the wish list (Table 4). It was frequently mentioned as being useful by low-intensity caregivers, and even more by those who combined longer hours of work with high-intensity caregiving. While 6 in 10 high-intensity caregiving women who were not employed mentioned relief as desirable, the number was almost 8 in 10 for those who worked longer hours. Occasional relief can come from a variety of sources, including family members, paid formal help, or government-arranged home care.

Flexible work arrangements were also commonly reported as a way to ease the pressures of caregiving. This could take the form of allowing an employee to adjust regular work hours or allowing time off as needed—for example, to take someone to a doctor's appointment. As expected, the desire for flexibility varied with the number of hours worked, with those working longer hours more likely to consider this an important issue. Among women caregivers in the low-intensity category, 44% of those working 40 hours or

less stated flexibility would help them, compared with 62% working longer hours. The desire for flexibility also increased with caregiving intensity.

Financial compensation was mentioned by more than half of high-intensity caregivers and somewhat less by other care providers. This assistance could help cover costs faced by caregivers or counterbalance reductions in employment income. Among medium- and high-intensity caregiving men, those working fewer hours or not at all were more likely than those working longer hours to desire financial compensation (57% for high-intensity caregivers not employed versus 43% for those working longer hours).

Information on how to be a more effective caregiver or the long-term illness of the care recipient can help the care provider understand requirements and perhaps help them provide better care. Such information may also help to allay guilt feelings regarding inadequacy, thereby improving the emotional well-being of the caregiver. This coping strategy was mentioned as desirable by more than 40% of women and more than 30% of men.

**Table 4 Caregivers' wish list**

	Intensity of caregiving								
	Low			Medium			High		
	Not employed	40 hours or less	Over 40 hours	Not employed	40 hours or less	Over 40 hours	Not employed	40 hours or less	Over 40 hours
	%								
<b>Women 45 to 64</b>									
Occasional relief	39	43	63	39	55	58	60	66	77
Flex work/study arrangements	21	44	62	16	47	52	30	53	53
Financial compensation	40	34	48	43	44	38	56	49	58
Information on effective caregiving	40	45	54	37	44	45	52	49	46
Information on long-term illness	44	45	58	43	47	50	57	48	54
Counselling	28	27	F	23	25	29	37	43	36
<b>Men 45 to 64</b>									
Occasional relief	23	43	39	49	42	52	60	58	57
Flex work/study arrangements	F	30	41	22	37	37	37	45	44
Financial compensation	28	21	27	43	37	33	57	46	43
Information on effective caregiving	29	35	38	43	38	39	49	36	47
Information on long-term illness	33	34	32	43	42	38	54	49	48
Counselling	F	17	23	20	28	19	35	39	23

Source: Statistics Canada, General Social Survey, 2002



Employed caregivers providing over one hour of care per week, regardless of the number of hours they worked, mentioned the importance of having a break from their caregiving duties more often than flexibility, information, or even financial compensation.

### Yet life is good

Despite the stress and burden that caregiving sometimes brings, especially when combined with employment, it seems that life for caregivers is generally good. Indeed, regardless of caregiving intensity, over 70% of employed caregivers reported their life satisfaction level as very good to excellent. This was in fact somewhat higher than for those not employed and the non-caregivers (Table 5).<sup>10</sup> Even among those combining over 40 hours of employment with over 4 hours of caregiving, 73% reported very good to excellent life satisfaction—similar to those who provided less caregiving. However, caregivers who were not employed were the least likely to report higher levels of life satisfaction. For example, only 63% of low-intensity caregivers who were not employed felt their life satisfaction was very good to excellent, substantially less than those working shorter hours (81% for women and 71% for men) or longer hours (76% for women and 79% for men). This seems to indicate that despite the stresses and strains that caregiving can bring, having a job at the same time does not necessarily reduce life satisfaction—it may even improve it.

**Table 5 Proportion responding very good to excellent life satisfaction**

Aged 45 to 64	Not employed	40 hours or less	Over 40 hours
		%	
<b>Non-caregivers</b>			
Women	60	74	70
Men	51	69	74
<b>Intensity of caregiving</b>			
<b>Low</b>			
Women	63	81	76
Men	63	71	79
<b>Medium</b>			
Women	70	79	73
Men	59	79	68
<b>High</b>			
Women	70	78	73
Men	66	74	73

Source: Statistics Canada, General Social Survey, 2002

While this may suggest that employment provides a helpful diversion for care providers, it may also reflect differences in the characteristics of those not employed. Perhaps other aspects of their life such as personal health or lack of income have led to lower levels of satisfaction.

### Summary

As the baby-boom generation reaches the traditional retirement age and the potential for labour shortages increases, pressure to keep older workers in the labour force may mount. In addition, boomers are better educated and many may wish to continue working longer (Duchesne 2004). However, they may also face conflicting demands on their time as older relatives and friends require care. Maintaining a healthy balance between paid employment and caregiving will be a priority for many.

Roughly equal numbers of men and women aged 45 to 64 are involved in informal caregiving to seniors. Women are more likely to be high-intensity caregivers, while men work longer hours at paid employment. It seems that both men and women are being pulled but in different fashions.

Changes in social activities, holiday plans and sleep patterns are more common among high-intensity caregivers, no matter how many hours of paid work are involved. Yet for high-intensity caregiving women, more of those working longer hours reported substantial socio-economic consequences.

Workers aged 45 to 64 include both those advancing in their careers and those approaching retirement. Depending on the time they devote to caregiving and to employment, caregivers may find their work affected. Two-thirds of women and nearly half of men who combined more than 40 hours of employment with 4 or more hours of caregiving per week experienced substantial job-related consequences such as a reduction in hours or income or a change in work patterns.

For women providing over one hour of care per week, more hours of employment were associated with high levels of guilt. More than 6 in 10 of those working longer hours felt substantial guilt. Indeed, longer working hours may be preventing these women from providing as much care as they would like. However, caregiver burden seems to be more strongly associated with intensity of caregiving than with intensity of employment.



## Retirement decisions and caregiving

Retirement is a personal decision and can be taken for many reasons. All currently employed respondents were asked the reasons that would most likely cause them to retire, while those already retired were asked why

they had done so. Multiple responses were permitted, including the need to provide care to a family member.

For those who had never retired, anticipated reasons were often financially related. The common expression

Freedom 55 implies having adequate financial resources to cease work. Indeed, having adequate retirement income was very often stated as a reason to retire, second only to simply wanting to stop work. Roughly two-thirds of women and men stated adequate retirement income, regardless of whether they were providing elder care or not.

While other job-related issues were also mentioned, so was the anticipated need to provide care to a family member. Some 21% of women caregivers reported that the need to provide care would be a likely reason for retirement, compared with 13% of women who were not providing care at the time. However, for men, non-caregivers mentioned this reason only slightly more often than caregivers (11% versus 9%). Although not known for sure, this does suggest that upwards of 1 in 5 women and 1 in 10 men could retire sooner than planned because of a caregiving responsibility.

For those who had already retired, financial considerations were also in the forefront, with 62% of women caregivers and 69% of men having felt that retirement was financially possible. While other reasons such as wanting to stop working or wanting to do other things also played a prominent role, the need to provide care was often mentioned.<sup>11</sup> Indeed, 1 in 5 caregiving women reported this as a reason for their retirement, twice the rate of those not providing care at the time of the survey. However, the sharp difference between caregivers and non-caregivers does not exist for men (8% and 6% respectively). Among caregivers, women were more than twice as likely as men to report caregiving as a reason (21% versus 8%).

### Reasons for retirement

	Women 45 to 64		Men 45 to 64	
	Caregiver	Other	Caregiver	Other
	%			
<b>Not retired<sup>1</sup></b>				
Want to stop working	73	72	75	69
Have adequate retirement income	68	63	71	66
Desire to start different career or part-time work	38	34	41	39
Health	30	34	29	30
Mandatory retirement	30	28	24	23
Job ending and unable to find other work	24	27	22	24
Need to provide care to a family member	21	13	9	11
Company early retirement plan	19	23	26	23
<b>Retired</b>				
Wanted to stop working	56	46	50	41
Retirement financially possible	62	46	69	53
To do other things	47	36	47	36
Health	30	36	34	38
Mandatory retirement	4	6	8	9
Unemployed and couldn't find new job	5	7	7	6
Needed to provide care to a family member	21	10	8	6
Company early retirement plan	15	13	37	27
Completed required years of service	27	19	50	40
No longer enjoyed work	23	14	20	14

<sup>1</sup> Also includes those who retired before age 30.

Source: Statistics Canada, General Social Survey, 2002

For each level of caregiving intensity, longer employment hours were associated with higher stress. In the high-intensity category, 82% of women working longer hours reported sometimes or often feeling stressed balancing their responsibilities, compared with 54% of women not employed.

Despite the juggling, life is generally good for most employed caregivers. For both women and men, even among those combining over 40 hours of

employment with over 4 hours per week of elder care, nearly three-quarters reported very good to excellent life satisfaction. This is a positive finding, especially considering that more and more older workers will likely have aging parents who may be living on their own. While previous research has centred around the struggle to combine paid work and child care, future concern may be more on paid work and elder care.

As with child care, employers may help ease the strain by offering special leave, flexible work arrangements, or other workplace assistance.

Occasional relief was a common desire for those providing care, regardless of hours of employment. Increased work hours magnified this desire, especially for women. For high-intensity caregiving women who were not employed, 6 in 10 mentioned relief as desirable, compared with 8 in 10 who worked longer hours.

### Perspectives

#### ■ Notes

- 1 In this study, 'work' or 'employment' also includes self-employment.
- 2 This leaves out some caregivers who are younger than 45, but the survey included only those 45 and over. Also, many caregivers are 65 or older, but because many are likely to be retired, the employment aspect would not apply.
- 3 Indexes in this study were constructed similarly to those in *Eldercare in Canada* (Statistics Canada 1999). However, that study was based upon a previous cycle of the GSS, which had different questions. The weighting of the answers within each index also differed. Indexes were used instead of individual questions to allow more results to be shown since using individual questions resulted in many cells being suppressed due to small sample sizes.
- 4 For indexes containing both yes/no and never/sometimes/always questions, a yes response was given the value of 2. For indexes containing only yes/no questions, a yes response was given the value of 1.
- 5 Median values are reported because of the highly skewed nature of the data, with some caregivers providing many hours of care per week. The average values are substantially higher (9.5 hours for women and 5.2 hours for men).
- 6 Ideally, a further breakdown into full- and part-time work would be made, but sample size does not permit this level of detail when the population is also divided into caregiving intensities.
- 7 This index excludes economic consequences related to employment. These factors are part of the employment-related changes index.
- 8 They were also asked if caregiving had caused them to quit their job. While this question is certainly a strong consequence of caregiving, it has been excluded from the employment changes index. Because quitting is such a drastic

consequence, combining it with other less severe consequences in the index would downplay its importance. Indeed, this consequence is a very rare event and as such, results for this question cannot be presented for the breakdown of the population used in this study.

9 A direct burden question asked, "Overall, how burdened do you feel in helping people over 65?" Results from this question were generally similar to the index so are not shown.

10 Williams (2004) found that virtually the same proportion of non-caregivers and sandwiched workers (those providing both child care and elder care) reported being satisfied with life.

11 It is not known if the respondent was a caregiver at the time of the retirement.

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# Measuring housing affordability

Jacqueline Luffman

**S**helter is a major cost in most family budgets. The amount a household is able or willing to pay for housing determines not only the quality of the dwelling but also the choice of community or neighbourhood. Indeed, housing costs affect disposable income, access to jobs, health status, and general inclusion in society (Carter and Polevychok 2004). However, housing costs are not uniform, with owners and renters differing sharply. A little over 20% of the household budget goes to shelter costs among renters but only 13% among homeowners.<sup>1</sup>

Determining housing affordability is complex. For example, some households may choose to spend more on housing because they feel they can afford to, while others may not have a choice. Traditionally, affordability has been based on a ratio of housing costs to total household income. A household paying 30% or more of its pre-tax income for housing is considered to have affordability problems. However, many researchers are beginning to use detailed spending data to assess affordability since this reflects all household spending priorities (Pendakur 2001; Miron 1984). This article proposes an alternative measure of housing affordability based on household expenditure, which highlights the attributes of the Survey of Household Spending (SHS) (see *Data source and definitions*).

While rental and housing prices doubtless affect affordability, their impact will be tempered by many other factors. These are the focus of the analysis here. Affordability problems are subdivided into moderate and severe (see *Methodology*), and differences between the two are examined. Multivariate analysis was used to assess the significant factors associated with housing affordability problems. Although both the income and expenditures measures of housing affordability are presented, the focus is on the expenditure approach.

## Core housing need and housing affordability

According to Canada Mortgage and Housing Corporation (CMHC), acceptable housing is in adequate condition (does not require major repairs), of suitable size, and affordable (costs less than 30% of before-tax household income).<sup>4</sup> A household is said to be in core housing need if its housing fails to meet one of these standards and if it is unable to pay the median rent for alternative local housing meeting all standards without spending 30% or more of its before-tax income. This paper focuses strictly on households that spend 30% or more of their budget on housing and does not look at the concept of core housing need.<sup>5</sup>

Housing that is not affordable is more common than housing that is overcrowded or needs repair. In 2001, 20.2% of households did not meet the classic affordability standard (less than 30% of before-tax household income spent on shelter). Of these households, 7.9% were deemed to have access to acceptable housing because they had enough income to pay the median rent in their local area, leaving 12.3% in core housing need (CMHC 2005).

## Most families live in affordable, adequate and suitable housing

Ninety-five percent of households lived in suitable housing and 93% lived in adequate housing in 2004, according to the Survey of Household Spending and the CMHC definition. Renters, however, were more likely than owners to live in overcrowded dwellings (8% versus 3%). Owners and renters were equally likely (about 7%) to live in housing in need of repair.

Affordability is generally a greater challenge. About 14% (or 1.7 million) of households spent 30% or more of their budget on shelter costs in 2004. Of these, 12% spent between 30% and 50%, and 2% spent 50% or

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## Data source and definitions

The **Survey of Household Spending (SHS)** has been conducted annually since 1997. It gathers detailed information about household spending during the previous calendar year. The survey covers about 98% of the population in the 10 provinces. People living in residences for senior citizens (such as nursing homes) as well as those in all types of institutions (including hospitals and prisons) are excluded. Data for the territories were collected for the years 1997 to 1999, but sampling variability precludes release.

The SHS samples over 20,000 households. The analysis here focuses exclusively on full-year households. Households that both rented and owned during the year (mixed tenure) are excluded.

A **full-year household** is a person or group of persons occupying one dwelling unit. The number of households, therefore, equals the number of occupied dwellings. A full-year household has at least one full-year member.

**Total household income** before taxes includes income from earnings, investments, government transfers, and other sources. Households reporting zero or negative income are excluded.

**Investment income** includes dividends, interest, net rental income, and interest from loans or mortgages.

**Government transfers** are the Child Tax Benefit, Old Age Security, Guaranteed Income Supplement, the Allowance, Canada or Quebec Pension Plan benefits, Employment Insurance benefits, the GST credit, provincial tax credits, social assistance, provincial income supplements, workers' compensation benefits, veterans' pensions, Civilian War Pensions and Allowances, and other income from government sources.

**Other income** covers pensions, annuities, RRIF withdrawals, and other money income such as alimony, separation allowance, child support, retirement allowance, severance

pay, income maintenance plan payments, scholarships, bursaries, and income from outside Canada.

**Other money receipts** include money gifts received from persons outside the household, cash inheritances, life insurance settlements, and net winnings from games of chance.

**Total household expenditures** are expenses incurred during the year for food, shelter, household operations, household furnishings and equipment, clothing, transportation, health care, personal care, recreation, reading materials, education, tobacco products and alcoholic beverages, games of chance, and miscellaneous items. Also included are personal taxes, personal insurance payments and pension contributions, and gifts of money and contributions to persons outside the household.

**Shelter costs** consist of rent, regular mortgage payments (principal and interest), property taxes, condominium fees, as well as electricity, fuel, water, and other municipal services.

**Severely shelter-cost burdened households** spend 50% or more of their income or expenditures on shelter. **Moderately burdened households** spend 30% to 49.9%.

A **census metropolitan area (CMA)** has a population of at least 100,000 and consists of one or more adjacent municipalities situated around a major urban core. A large CMA is defined here as having a population of at least 500,000, and a small CMA as 100,000 to 499,999. **Towns** are defined as urban centres having a population less than 100,000. **Rural areas** include all territory lying outside urban areas.

Based on the **low-income measure**, a family is deemed to be in low income if its income is less than 50% of median family income adjusted for family composition.

more. Households spending 50% of their income can be considered severely cost-burdened and those spending 30% to 50% moderately cost-burdened (Pomeroy 2001).

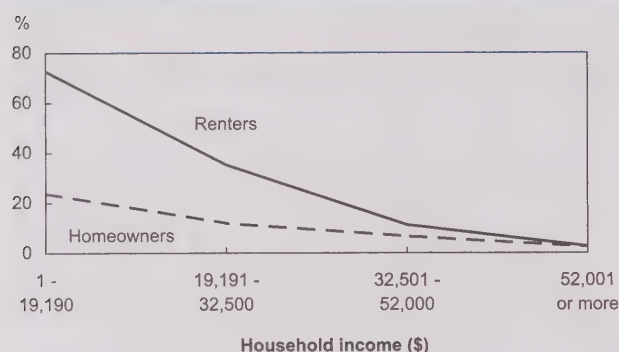
## Renters more likely to experience affordability problems

About one-third of households in 2004 were renters, many of whom lived alone. Compared with owners, they are more likely to be in large census metropolitan areas and to be living in low income.<sup>6</sup> Renters and owners differ considerably, with owners having at least twice the income of renters and substantially more

wealth (Hulchanski and Shapcott 2004, 5). As a result, renters are more likely to experience housing affordability problems. In fact, 31% of renters spent 30% or more of their budget on shelter compared with only 6% of owners (Chart A). The gap was particularly evident in the lowest quarter of the income distribution. Here almost three-quarters of renters did not meet the affordability standard compared with only a quarter of owners. In the top income quarter, the difference between the two disappeared, with neither renters nor owners in this position. The majority of renters are non-subsidized and are the focus of this article (for a discussion of subsidized renters, see *Subsidized housing not necessarily synonymous with affordability*).



**Chart A Renters spending 30% or more of their budget for housing decreases sharply as income increases**



Source: Statistics Canada, Survey of Household Spending, 2004

### Québec has lowest shelter costs, Toronto the highest

According to CMHC, basic shelter costs consist of rent or regular mortgage payments, condominium fees, utilities (water, fuel, and electricity), and property taxes (Table 1). The average shelter cost in 2004 was \$9,400, about 15% of the average household budget. Large metropolitan areas, particularly Toronto and Vancouver, had the highest spending on rents. About one-third of Toronto renters spent 30% or more of their budget on shelter (Table 2). Montréal had the highest proportion of renters (46%), but they were slightly less likely than average to have shelter affordability problems (28%). Québec had the lowest annual mortgage payments, but also a lower proportion of owners than the national average (55% versus 65%). Toronto posted the highest average spending on utilities (\$3,200 annually) and the highest property taxes (\$3,200). Households in Atlantic region CMAs spent the least on property taxes, particularly Saint John (\$1,400).

### Shelter costs eat up most of the budget for renters, less so for owners

Generally speaking, average and median household expenditures for renters are considerably lower than for owners (with or without a mortgage). This was true for all categories in the SHS, including food, shelter, clothing, and recreation. Although those in subsidized housing had lower shelter costs, they also had lower expenditures in all categories. Since renters and those in subsidized housing tend to have lower incomes, they spend mainly on necessities. The former spent just under 40% of their budget on food, shelter and clothing while the latter spent 49% (Chart B). Owners without a mortgage spent the smallest portion of their household budget on basic necessities (24%).

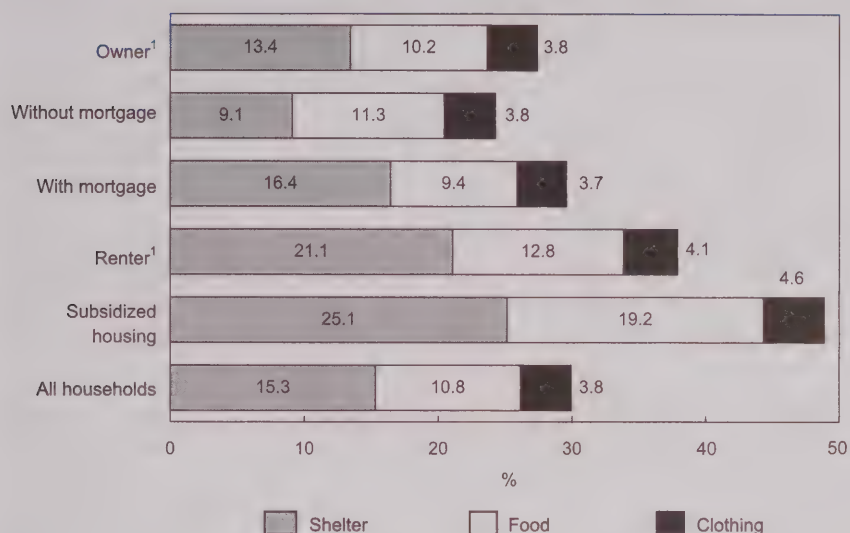
**Table 1 Average annual expenditures on shelter components in select CMAs**

	Rent	Mortgage	Water, fuel, electricity	Property taxes	Annual shelter costs	Proportion of renters <sup>1</sup>
			\$			%
Toronto	9,370	12,080	3,210	3,170	12,730	28.1
Calgary	7,820	10,190	2,680	1,880	11,640	24.3
Vancouver	8,790	12,180	1,970	2,230	11,520	33.3
Ottawa	F	9,460	2,510	3,060	10,950	F
Victoria	7,740	12,130	1,320	2,030	10,880	33.9
Edmonton	7,430	8,320	2,680	1,930	9,790	24.0
<b>Canada</b>	<b>7,040</b>	<b>8,680</b>	<b>2,330</b>	<b>2,190</b>	<b>9,390</b>	<b>28.1</b>
Saskatoon	5,950	7,210	2,620	2,450	9,280	26.3
Halifax	6,930	7,640	2,230	1,780	8,930	29.7
St. John's	5,280	7,700	2,580	1,470	8,540	20.9
Regina	5,470	5,960	2,520	2,310	8,470	23.9
Montréal	6,430	6,850	1,670	2,750	8,310	45.5
Saint John	5,410 <sup>E</sup>	7,560	2,470	1,430	7,970	28.0 <sup>E</sup>
Winnipeg	5,810	5,610	2,350	2,300	7,940	24.9
Québec	6,770	5,250	1,520	2,190	7,530	40.8
Towns (under 100,000)	5,620	7,110	2,220	1,700	7,750	19.2
Rural areas	5,260	6,820	2,370	1,360	6,870	4.7

<sup>1</sup> Excludes those in subsidized housing.

Source: Statistics Canada, Survey of Household Spending, 2004



**Chart B Mortgage-free owners spent proportionately the least on basics**

1 Excludes those in subsidized housing.

Note: Based on average costs and expenditures, after adjusting for household size.  
Source: Statistics Canada, Survey of Household Spending, 2004

**Table 2 Households spending 30% or more of their budget on shelter**

	Expenditures	Owners only
		%
<b>Canada</b>	<b>30.7</b>	<b>5.6</b>
Toronto	31.7	8.7 <sup>E</sup>
Calgary	31.6	9.1 <sup>E</sup>
Vancouver	30.4	11.5
Victoria	32.2 <sup>E</sup>	F
Edmonton	32.7 <sup>E</sup>	5.1 <sup>E</sup>
Montréal	28.5	5.9 <sup>E</sup>
All other CMAs		
100,000 and over	36.2	6.9 <sup>E</sup>
Towns (under 100,000)	31.3	3.4 <sup>E</sup>
Rural areas	18.7	2.9

Note: Excludes those in subsidized housing.

Source: Statistics Canada, Survey of Household Spending, 2004

### Renters with a severe shelter-cost burden earn substantially less

The 30% threshold of housing affordability is a rather arbitrary measure (CRA 1997; Miron 1984; Hulchanski 2005). This section examines differences between renters with moderate (30% to 49%) and severe (50% or more) shelter-to-expenditure ratios. Renters with a severe shelter-cost burden are a diverse group, although one-person households have a greater tendency to fall into this category. About 40% were non-seniors living alone, and 33% were seniors living alone (Table 3). Renters with a severe shelter-cost burden also tended to be depend-

ent on government transfers as their main source of income (81%), and were highly likely to be in the bottom quarter for income and expenditure (80% and 82% respectively). About 44% had a physical disability compared with only 16% of households without an affordability problem. Households with a severe shelter-cost burden also had very little employment earnings (\$1,300 annually) compared with households with no affordability problem (\$40,200 annually on average).

One-person renter households were the most common household type among those with a moderate cost burden, but many families were also found in this category. About 8% of renters with a moderate shelter-cost burden were lone-parent families, 17% were non-senior families, and 10% were senior families. While those with a severe shelter-cost burden were for the most part in the bottom quarter for household income (up to \$19,190 per year), those with a moderate burden showed a more even distribution by income. The latter tended to be slightly larger households (1.7 persons) than their counterparts with a severe burden (1.4).

### Renters with a severe shelter-cost burden have little room for discretionary spending

Renters in the severe burden category spent 53% of their total budget on basic necessities compared with 28% among renters with no affordability problem (Chart C). The proportion of the budget going toward food was similar for all groups. Clothing expenses were also fairly similar. However, although severely

**Table 3 Renter households by shelter-cost burden**

	Severe		Moderate		None	
	Expenditures	Income	Expenditures	Income	Expenditures	Income
			%			
<b>Renters</b>	<b>7.3</b>	<b>12.2</b>	<b>23.3</b>	<b>23.1</b>	<b>69.4</b>	<b>64.8</b>
<b>Household type</b>						
Senior living alone	33.4	24.9	22.5	21.0	5.5	5.8
Other senior	9.4	4.6	10.3	10.0	16.0	13.3
Non-senior living alone	40.0	41.6	38.0	34.3	29.7	28.9
Non-senior couple	7.9 <sup>E</sup>	15.0	15.1	18.7	42.5	42.9
Other non-senior	F	F	2.2 <sup>E</sup>	1.9 <sup>E</sup>	3.0	3.2
Lone-parent family	F	8.0 <sup>E</sup>	7.9	8.6	6.6	6.2
<b>Disability</b>						
Yes	44.1	37.1	32.5	30.0	15.5	16.0
No	55.9	62.9	67.5	70.0	84.5	84.0
<b>Major source of income</b>						
Wages and salaries	F	19.8	30.7	36.5	77.1	78.6
Self-employment	3.2	4.3 <sup>E</sup>	4.8	5.9	6.0	5.5
Investments	F	F	1.8 <sup>E</sup>	F	1.2	0.9
Government transfers	80.8	67.9	54.6	47.8	10.6	10.1
Other	F	6.3 <sup>E</sup>	7.0	7.5	4.9	5.0
<b>Household income</b>						
Up to \$19,190	80.1	83.4	53.7	44.6	10.0	5.1
\$19,191 to \$32,500	16.9	15.1	32.5	42.8	23.3	21.2
\$32,501 to \$52,000	3.0	1.5	11.1	10.4	31.8	35.2
Over \$52,000	F	F	2.8	2.2	34.9	38.5
<b>Total expenditure</b>						
Up to \$22,135	81.9	65.3	57.6	47.9	7.7	8.7
\$22,136 to \$34,409	15.1	21.7	31.4	30.9	24.0	22.7
\$34,410 to \$52,361	3.0	9.1	8.9	15.9	32.9	32.0
Over \$52,361	0.0	4.0	2.2	5.4	35.4	36.6
<b>Average household size</b>	<b>1.4</b>	<b>1.6</b>	<b>1.7</b>	<b>1.8</b>	<b>2.2</b>	<b>2.2</b>
			\$			
Shelter costs	9,440	8,980	8,280	8,340	8,340	8,280
Total expenses	15,860	22,960	22,640	26,490	49,530	49,710
Income before taxes	15,050	14,030	21,390	22,560	47,990	51,050
Earnings	1,280	3,050	8,520	10,190	40,160	43,010
Government transfers	11,160	9,350	9,570	9,090	4,640	4,810
Other money receipts	580	3,730	1,070	770	1,350	570

Note: Excludes those in subsidized housing.

Source: Statistics Canada, Survey of Household Spending, 2004

**Table 4 Odds ratios of logistic regression models**

	Renters spending 30% or more on shelter	
	Expenditures	Income
<b>Household type</b>		
Senior living alone	1.41	0.56
Senior couple	1.10	0.30*
Other senior	0.88	0.27
Non-senior living alone	1.25	0.65
Couple with or without children (ref)	1.00	1.00
Lone-parent family	1.38	1.18
Other non-senior	2.42	1.21
<b>Place of residence</b>		
Toronto	4.13*	3.08*
Vancouver	3.16*	2.43*
Montréal	1.23	0.90
Calgary	4.07*	3.01*
Edmonton	2.28	1.91
Victoria	1.29	1.96
CMA 100,000 to 499,999 other than above	1.42	1.24
Town (under 100,000)	0.91	0.80
Rural area (ref)	1.00	1.00
<b>Major source of income</b>		
Self-employment	1.63	2.44*
Government transfers	5.52*	6.38*
Investments	2.09*	7.28*
Other	3.46*	3.32*
Wages and salaries (ref)	1.00	1.00
<b>Number of earners</b>		
One	0.73	0.69
Two or more	0.41*	0.34*
None (ref)	1.00	1.00
<b>Disability</b>		
Yes	1.41	1.06
No (ref)	1.00	1.00
<b>Other money receipts</b>		
Yes	0.86	2.63*
No (ref)	1.00	1.00
<b>Total household income</b>		
Up to \$19,190	18.42*	...
\$19,191 to \$32,500	4.79*	...
Over \$32,500 (ref)	1.00	...
<b>Total expenditure</b>		
Up to \$22,135	...	14.08*
\$22,136 to \$34,409	...	3.76*
Over \$34,409 (ref)	...	1.00

\* Significant difference from the reference group (ref) at the .05 level.

Notes: Full-year households only, subsidized households excluded.

Source: Statistics Canada, Survey of Household Spending, 2004

burdened households managed to find the money to cover their basic needs, they had little left for discretionary spending.

### Renters in Toronto, Vancouver and Calgary have higher odds of affordability problems

Many factors combine to explain why some renter households have a higher shelter-cost burden than others. Logistic regression was used to single out the factors most affecting housing affordability. The model tested the effects of each variable on the probability of spending 30% or more on shelter while holding all other variables constant.

Rents vary considerably across the country, and for the most part, the larger the city, the higher the costs. In the largest cities, just under a third of renters spent 30% or more of their household budget on shelter, compared with just 19% in rural areas. Even after taking into account income levels and other household characteristics, Toronto and Calgary renters had four times the odds of spending 30% or more on shelter than renters in rural areas (Table 4). Those in Vancouver also had higher odds.

### Household income is key

Some households simply may not have the capacity to reduce their housing expenditures. Others may spend a large proportion of their income on housing because they have chosen to live in a larger home or a particular neighbourhood. Nonetheless, renters with income up to \$19,190 per year had 18 times the odds of being cost-burdened compared with those in the top half of the income distribution. The odds were 5 times for those with income between \$19,190 and \$32,500. No matter whether the household consisted of an individual living alone, a lone-parent family, or a senior family, being in low income was a highly significant factor in being shelter-cost burdened.

The main source of household income was also important. Renters with housing affordability problems who had government transfers as their main source of income had almost 6 times the odds of being cost-burdened compared with wage and salary earners. Having two earners in the household compared with no earners reduced the odds significantly.



## Methodology

Because of differences in methodology, the proportion of those with housing affordability problems varies with different sources. The census is the most common source for determining housing affordability ratios. However, the Survey of Household Spending (SHS), in addition to being annual, has other advantages.

First, unlike the census, the SHS collects information on income and shelter expenditures for the same reference period. Second, in the SHS, households moving between rental and owned accommodation during the reference year are asked about both rent and mortgage payments. In the census, those who are renting on the day of the census are asked about their rent while owners are asked about their mortgage and other payments. Third, the SHS collects more detailed housing information—for example, utility expenses, vacation home expenses, insurance premiums, maintenance and repairs, and deductions from expenses for owning a business or farm (see *Data source and definitions*).

When it comes to calculating the shelter-to-income ratio, the SHS provides a choice of denominators: income or expenditure. Income may not always represent the full range of resources a household has at its disposal. For example, it does not consider asset liquidations, other money receipts, or expected future changes in income (Miron 1984, 147). Some households have investment losses that reduce income even though their cash flow remains steady. Similarly, households with a self-employed principal earner may have incomes that fluctuate from year to year. Such households may compensate by using savings, cashing in investments, or borrowing—none of which are income. However, these strategies even out cash flow to pay for daily expenses.

Comparing shelter costs with expenditures instead of income may represent a more realistic picture of a household's standard of living. Even with zero or negative income, a household may still have the necessary money to meet their needs. On the other hand, a household with high income may spend very little because of large debts or the anticipation of a drop in income. In 2004, 92,000 full-

year households (0.8% of all households) had shelter costs that exceeded their income. Of these, 50% received money gifts from persons outside the household, cash inheritances, life insurance settlements, or winnings from games of chance. Another 9% relied on self-employment income.

Using the traditional income-based approach, about 163,000 households are eliminated from the sample because their income is either zero or negative.<sup>2</sup> Using the expenditure base, only 59,000 households are eliminated because of unreported expenditures or shelter costs exceeding total expenditures.

	Income based	Expenditure based
		'000
<b>All full-year households</b>	11,790	11,893
Households excluded	163	59
		%
<b>Housing affordability ratios</b>		
Less than 30%	83.1	86.0
30% or more	17.0	14.0
30% to less than 50%	12.4	11.6
50% or more	4.6	2.4

Source: Statistics Canada, Survey of Household Spending, 2004

The income-based affordability ratio is slightly higher (3.0 percentage points) than the expenditure measure for those spending 30% or more on shelter costs.<sup>3</sup> The main difference lies with households spending 50% or more, likely because the expenditure denominator eliminates a number of income outliers. That is, the expenditure method gives a more realistic picture of standard of living. The differences between the two methods are much less pronounced for those who spent 30% to less than 50% (a difference of only 0.8 percentage points).

The logistic regression points out differences between the income and expenditure approach. For example, using the income measure, self-employment as the main source of income and receiving money from gifts and inheritances significantly affected affordability. This was not so using the expenditure measure, suggesting that the income-based measure may exaggerate the degree to which self-employed households incur a burden. Many self-employed individuals do not have steady income every month. The income

## Homeowners and shelter affordability

The number of homeowners spending 30% or more of their income on shelter was relatively small compared with renters (6% versus 31%) (Table 2). For these owners, the situation may have been temporary or a matter of life-style choice—for example, in the case of young families who are likely to have large mortgage payments or debts. In fact, according to the CMHC definition of core housing need, about half of owners who spent 30% or more of their income on shelter in 2001 had sufficient income to rent affordable housing in their area (CMHC 2005).

**Table 5 Distribution of select characteristics by household tenure type**

	Total households	Subsidized housing	Renters <sup>1</sup>	Mixed <sup>2</sup>	Owners	
					With mortgage	No mortgage
				%		
<b>Household type</b>						
Senior living alone	8.8	30.6	11.4	6.7	1.2 <sup>E</sup>	13.0
Senior couple	12.5	F	5.3	16.3	6.6	27.4
Other senior	2.3	F	2.2	2.5	1.5 <sup>E</sup>	3.6
Non-senior living alone	17.0	29.5	32.5	9.5	10.7	8.2
Couple with or without children	50.1	14.2	33.7	58.8	72.7	42.8
Lone-parent family	5.5	15.8	7.0	4.3	4.6	3.9
Other non-senior	1.8	F	2.6	1.5	1.4 <sup>E</sup>	1.6 <sup>E</sup>
<b>Place of residence</b>						
Large CMA (500,000 and over)	51.0	59.6	59.6	46.7	49.8	43.1
Small CMA (100,000 to 499,999)	17.6	17.5 <sup>E</sup>	16.5	18.3	19.5	17.0
Town (under 100,000)	19.9	18.1 <sup>E</sup>	19.2	20.1	18.5	21.8
Rural area	11.5	4.8	4.7	15.0	12.2	18.2
<b>Major source of income</b>						
Self-employment	7.7	F	5.6	9.1	9.4	8.6
Government transfers	20.1	66.8	25.9	15.3	4.3	27.8
Investments	1.5	F	1.3	1.6	0.3 <sup>E</sup>	3.2
Other	7.6	4.3 <sup>E</sup>	5.5	8.8	3.4	15.2
Wages and salaries	62.8	27.3 <sup>E</sup>	61.0	65.1	82.5	45.2
<b>Low-income measure (after tax)</b>						
In low income	12.5	58.7	23.0	5.4	2.5	8.7
Not in low income	87.6	41.3	77.0	94.6	97.5	91.3
<b>Other money receipts</b>						
Yes	19.0	20.4 <sup>E</sup>	22.5	17.0	19.5	14.1
No	81.0	79.6	77.5	83.0	80.5	85.9
<b>Living in unsuitable housing</b>	4.6	6.9 <sup>E</sup>	8.1	2.9	4.3	1.4 <sup>E</sup>
<b>Living in inadequate housing</b>	7.3	F	7.9	7.1	7.7	6.5
<b>Housing affordability ratio – income-based</b>						
Under 30%	83.1	57.6	64.8	92.2	89.5	95.2
30% to less than 50%	12.4	35.2	23.1	6.6	8.9	3.9
50% and over	4.6	7.3 <sup>E</sup>	12.2	1.3	1.5 <sup>E</sup>	0.9 <sup>E</sup>
<b>Housing affordability ratio – expenditure-based</b>						
Under 30%	86.0	59.1	69.4	94.4	92.6	96.4
30% to less than 50%	11.6	37.4	23.3	5.3	7.1	3.3
50% and over	2.4	F	7.3	0.3 <sup>E</sup>	F	F
<b>Average household size</b>	2.6	1.9	2.0	2.9	3.2	2.4
				\$		
Shelter costs	9,370	5,160	8,330	9,980	13,990	5,380
Income before taxes	64,710	20,000	39,350	78,330	87,090	68,300
Earnings	51,950	8,040	29,920	63,920	78,670	46,970
Government transfers	6,660	10,200	6,230	6,740	4,350	9,480
Income from other sources	4,180	1,490	2,340	5,210	2,880	7,910
Income from investments	1,770	270	620	2,390	1,060	3,910
Personal taxes	12,900	1,320	6,340	16,480	18,450	14,220

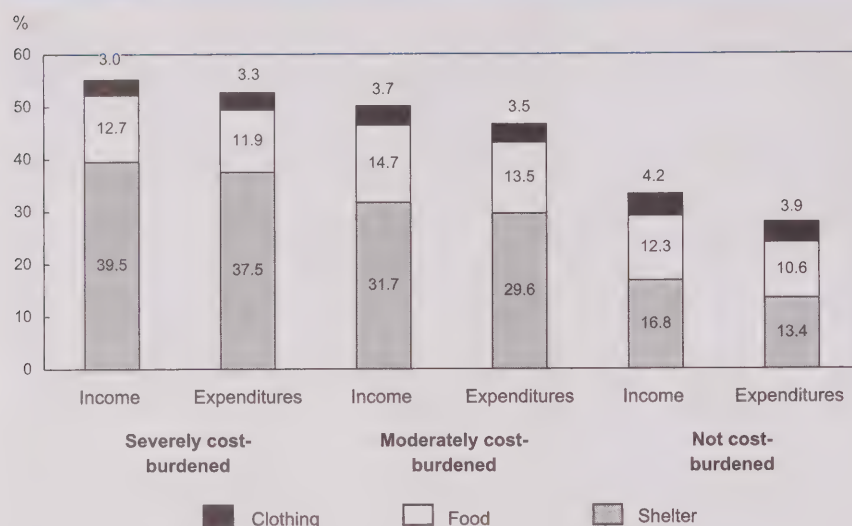
1 Minus those in subsidized housing.

2 Refers to households that both rented and owned in the same year.

Source: Statistics Canada, Survey of Household Spending, 2004



**Chart C** Regardless of their shelter costs, renters spent similar proportions on food and clothing



Note: Based on average costs and expenditures, adjusted for household size.  
Source: Statistics Canada, Survey of Household Spending, 2004

measure may therefore not reflect their management of regular expenses whereas their total expenditure information would.

## Summary

Measuring housing affordability is difficult. In some households, a high shelter-cost ratio stems from a choice based on spending priorities; in others, it is a valid indicator of housing affordability problems. Using the expenditure-based methodology, renters were found to be more susceptible to affordability problems. Although the majority live in affordable housing, 31% spent 30% or more of their budget on shelter. These households consist mostly of individuals living alone, those relying on government assistance, and those in low income. Somewhat surprisingly, food and clothing expenses took up a similar

proportion of the budget for all groups, regardless of their ability to afford housing.

Although shelter costs vary considerably across Canada, income is the major factor affecting affordability. Non-subsidized renter households in the bottom quarter of the income distribution had 18 times the odds of having an affordability problem, even taking into account the age structure of the household and place of residence. A number of factors may be at play, including the major source of household income. Reliance on government transfers was significantly associated with having an affordability problem. Having two earners reduced the odds significantly.

Housing policy has long used one single indicator of affordability based on the census. Using the Survey of Household Spending, the

## Subsidized housing not necessarily synonymous with affordability

The vast majority of households living in government-subsidized housing (about 470,000 households in 2004) are renters. Social or subsidized housing generally refers to housing that receives ongoing public subsidies to reduce rents to 25% to 30% of household income (Chisholm 2003). Households were asked whether they lived in government-subsidized housing, but not the amount or type of subsidy they received. These households made up about 6% of all renters in 2004. Many different types of households were involved, although most were individuals living alone (the likelihood of being a senior or a non-senior living alone and in subsidized housing is the same at about 30%). Two-thirds relied on government transfers as their main source of income (Table 5).

Although renters in subsidized housing had considerably lower average shelter costs than others (\$5,200 versus \$8,300), they also had lower household income and expenses. As a result, many were still paying 30% or more of their income or expenses on shelter costs. (About 18% were spending 30% to 34.9% of their budget on shelter costs, and 12% were spending 35% or more.)

expenditure ratio can provide a timelier and richer understanding of the concept of housing affordability.

## Perspectives

### Notes

- 1 Excludes those in subsidized housing.
- 2 CHMC relies mostly on census data for affordability calculations. As a result, they exclude farms and on-reserve housing.



3 Using the 2001 Census, CMHC's calculation of those spending 30% or more on shelter was 20.2%.

4 Affordability was originally set at 25%, its origin dating back to the 19th century when the accepted underwriting standard was one week's wages in four going for housing.

5 The core-need approach is useful because it considers affordability in the context of adequacy and suitability by eliminating households that could afford to pay the median rent in the same local area (Miron 1984, 121). In other words, it separates out those over-consuming or under-consuming housing. Although this paper does not look at core housing need, of the 14% of households spending 30% or more of their budget on shelter, about 7% lived in inadequate dwellings and 5% in unsuitable dwellings.

6 Based on the low-income measure. See *Data source and definitions*.

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# What's new?

## *Recent reports and studies*

### ■ FROM STATISTICS CANADA

#### ■ *Business bankruptcies*

The rate of business bankruptcies in Canada has declined to a 25-year low, but losses resulting from failures have not.

Just over 7,300 companies went bankrupt last year, about 7 firms for every 1,000 businesses. This was the lowest rate in the last 25 years, and about half the 1992 peak when 15.4 firms per 1,000 failed.

Financial losses associated with bankruptcy rose sharply in the early part of this decade, peaking in 2002 at more than \$6.6 billion. Since then, net liabilities have declined, and in 2005, they amounted to just under \$3.3 billion.

The most significant shift in rates occurred in Quebec. During the 1980s and 1990s, Quebec experienced much higher rates of bankruptcy than other regions. However, Quebec's rate has declined sharply since the mid-1990s, and is now comparable to those in other regions.

For more information, see the October 12, 2006 issue of *The Daily* on the Statistics Canada's Web site ([www.statcan.ca](http://www.statcan.ca)).

#### ■ *Employment in Northern Ontario*

Communities in Northern Ontario that had a diversified economy in 1981 were more likely to experience employment growth during the following two decades than their less diversified counterparts.

However, over time, this employment growth was associated with a tendency towards economic specialization. By 2001, communities had often become more economically specialized as the workforce shifted from farming, forestry and mining to service industries.

Between 1981 and 1991, employment in Northern Ontario rose at an annual average rate of 1%. However, between 1991 and 2001 it fell by 0.6% a year. By 2001, this had resulted in a workforce only 4% above the levels of 1981.

Employment growth varied widely among the communities of Northern Ontario during these years. About 72% of the communities had employment growth, while 28% experienced a decline.

Generally, job losses were substantial in the primary sector (agriculture, forestry and mining) and in industries that process primary sector commodities (such as sawmills, pulp and paper mills and smelters).

For more information, see the October 5, 2006 issue of *The Daily* on the Statistics Canada's Web site ([www.statcan.ca](http://www.statcan.ca)).

#### ■ *Pension coverage and retirement savings*

During the past two decades, the gap in pension contributions in preparation for retirement has widened sharply between families at the top of the earnings scale and those at the bottom.

Families at the top in 2003 contributed more towards their pensions and hence were likely to be better prepared for retirement than their counterparts in 1986. However, this was not the case for families with the lowest earnings. This growing inequality was seen not only for two-parent families, but also for lone-parent families and unattached individuals.

In 1986, two-parent families with husbands aged 35 to 54 in the top 20% of the earnings distribution contributed an average of \$8,000 to registered retirement savings plans (RRSPs) and employer-sponsored registered pension plans (RPPs). The average contributions of their 2003 counterparts had increased substantially to \$11,300.



In contrast, contributions of two-parent families with husbands aged 35 to 54 in the bottom 20% of the earnings distribution, averaged \$1,200 both in 1986 and 2003. As a result, the gap in family contributions to RRSPs and RSPs between high and low-income families widened.

For more information, see the September 26, 2006 issue of *The Daily* on the Statistics Canada's Web site ([www.statcan.ca](http://www.statcan.ca)).

### ■ **Competition, firm turnover and productivity**

The competitive process that shifts market share towards more productive firms accounted for about two-thirds of aggregate labour productivity growth in Canadian manufacturing from 1989 to 1999.

Turnover occurs as some firms gain market share and others lose it. Some of the resulting turnover is due to entry and exit. Another part arises from growth and decline in incumbent continuing firms.

Between 1989 and 1999, 58% of market share was transferred from firms that either contracted or closed to new or expanding firms.

Most of the shift results from firm entry and exit. From 1989 to 1999, new firms captured 33.6 percentage points in market share and closing firms lost 45.7 points. Among established firms, growing ones gained 24.7 points while those declining lost 12.6 points.

Firms that gained market share tended to be more productive than firms that lost market share. The firms that entered manufacturing by building or acquiring new plants were more productive than firms that exited by closing down or divesting existing plants. This suggests that firm turnover should make a positive contribution to overall labour productivity growth in manufacturing.

For more information, see the September 25, 2006 issue of *The Daily* on the Statistics Canada's Web site ([www.statcan.ca](http://www.statcan.ca)).

### ■ **Importance of knowledge capital**

While investments in physical capital, machinery, equipment and production facilities are often seen as hallmarks of growing companies, developing intangible, knowledge-capital capabilities is also important.

In young small firms, this knowledge capital often involves general business skills or basic capabilities related to management, financing and marketing required to survive their early years. Successful entrants report a strong emphasis on getting the fundamentals right across a wide range of strategic areas.

As young companies grow and mature, specialized competencies related to innovation and technology management emerge as the core forms of knowledge capital. Innovation capabilities related to research and development and advanced technology use are often what set high-growth firms apart from low-growth firms.

Innovation capabilities also discriminate between more and less successful firms when examining more comprehensive measures of business performance, such as changes in productivity, profitability and market share.

Firms build advanced innovation capabilities by developing knowledge capital in areas that complement their core research and development and technology capabilities. Successful innovators support innovation by developing a network of complementary skills, including those related to human resource management, marketing and production.

For more information, see the September 18, 2006 issue of *The Daily* on the Statistics Canada's Web site ([www.statcan.ca](http://www.statcan.ca)).

### ■ **The Alberta juggernaut**

Alberta is in the strongest period of economic growth ever recorded by a Canadian province. Its nominal gross domestic product (GDP) rose 43% between 2002 and 2005, with no sign of slowing down so far in 2006. As a result of this unprecedented boom, Alberta has the highest share of its population employed and the lowest unemployment rate of any province or state in North America.

The 12.7% average annual growth of Alberta since 2002 compares favourably with China's 14.8%, the fastest rate among the world's large economies. But, while China's growth was mostly volume, Alberta's was driven mainly by higher export prices. Still, its 4% average increases in real GDP were the highest in Canada after 2002.

Alberta's per capita GDP reached \$66,275 in 2005, nearly double the average income in 1995 and 56% above the national average. This deviation from the national average is the largest ever posted by a province.



Profits in Alberta more than doubled from 2002 (\$23.5 billion) to 2005 (\$53.1 billion). Most of this increase reflects the soaring price of oil and gas exports. Alberta accounted for 27% of all profits in Canada in 2005, nearly double its share of national GDP.

Over the last decade, Alberta has consistently had Canada's strongest labour market. When adjusted to a basis comparable with the United States (which excludes 15 year-olds), Alberta's 2.9% unemployment rate in June was the lowest of any province or state in North America, while it had the highest employment rate at 71.7%.

Job growth since 2002 has been led by mining, which has jumped by 33% (or 30,000 jobs) over the last three years and by 71% since 1999. As a result, it is now the sixth largest employer in the province, up from twelfth in 1999. In the northeastern part of the province (which includes the oil sands), one in every five workers is employed by the oil and gas industry.

For more information, see the September 14, 2006 issue of *The Daily* on the Statistics Canada's Web site ([www.statcan.ca](http://www.statcan.ca)).

### ■ **Labour productivity**

Labour productivity in the Canadian business sector, measured on a quarterly basis, fell by 0.4% between April and June. This is the first time in two years that it has slipped into negative territory. On a year-over-year basis, productivity growth declined from 2.1% in the first quarter to 1.4% in the second quarter of 2006.

The second-quarter decline in productivity was the direct result of a slowdown in economic activity combined with a more pronounced increase in hours worked. The goods-producing industries, which posted a 1.0% decline in labour productivity, were primarily responsible for the overall decline.

In the goods sector, production dropped in mining and oil and gas extraction, which suffered a number of production stoppages due to unforeseen repairs. In addition, economic activity in construction slowed down dramatically from the first quarter when unseasonably warm weather favoured this industry. Construction grew only 0.4% in the second quarter, a much slower pace than in the previous quarter (2.4%). Also, manufacturing output declined in the first two quarters of this year while its labour input has not yet adjusted to this decline.

In the United States, business productivity rose by only 0.4% between April and June, after posting a 1.1% gain (revised) in the first quarter of 2006.

For 2005 as a whole, the average annual rate of productivity growth for both Canadian and US businesses was identical at 2.3%.

Canada's annual performance in 2005 was the best since 2000. In the United States, the rate was the lowest on record since 1997, but it matched the average annual gain between 1995 and 2001.

For more information, see the September 13, 2006 issue of *The Daily* on the Statistics Canada's Web site ([www.statcan.ca](http://www.statcan.ca)).

## ■ **FROM OTHER ORGANIZATIONS**

### ■ ***Challenging misconceptions about organizing women into unions***

In many countries, women are the fastest growing group of unionized workers. As unions scramble to restore their flagging memberships, women become central to the process. Yet surveys of union organizers in Canada show that unions are only partially meeting women's demand for union representation, in large part because of bias in union organizing practices. This article challenges four popular misconceptions about women and unions. Namely, that: women are less likely to support unions than men; high rates of unionization in the public sector rather than women themselves explain the high rates of union growth amongst women; small workplaces are a particular barrier to organizing women; and women are more passive and avoid conflict, therefore reducing their likelihood of withstanding a hostile organizing drive. See "Challenging misconceptions about organizing women into unions" by Charlotte Yates, *Gender, Work & Organization*, November 2006, Vol. 13, no. 6, p. 565-584.

### ■ ***Housing and economic development***

New housing affects economic development through its impact on employment, savings, investment, and labour productivity. This has only recently come to be widely acknowledged. Since 1945, housing experts have articulated three views about the role of housing in economic development. In the early post-war decades most writers viewed housing as a social

expenditure and a drag on growth. A minority argued that housing could be an important adjunct to specific development projects, usually in isolated locations. Since the 1970s, housing has increasingly come to be seen as a contributor to growth, not only because house building is a major employer with large multiplier effects but also because housing is seen to have social consequences with diverse economic effects. See "Housing and economic development: The evolution of an idea since 1945" by Richard Harris and Godwin Arku, *Habitat International*, December 2006, Vol. 30, no. 4, p. 1007-1017.

### ■ ***International mobility of highly educated workers***

This study looks at determinants of bilateral migration flows in OECD countries. Migration is greatest between countries with large populations and is reduced when geographic, linguistic or religious 'distances' are large. Migration is also influenced by relative labour market conditions. Specifically, people tend to leave countries where economic conditions are relatively poor (high unemployment, low GDP per capita) and move where conditions are better. The results confirm the importance of foreign direct investment and trade as determinants of migration flows: both are complements to migration. Highly educated migrants are more influenced by the 'pull' of economic conditions in host countries, while those with less education are more heavily influenced by the 'push' of economic factors in their home countries. See *The International Mobility of Highly Educated Workers among OECD Workers*, by Steven Globerman and Daniel Shapiro, Working Paper Series, 2006, HRSDC-IC-SSHRC Skills Research Initiative, Industry Canada (<http://strategis.ic.gc.ca>).

### ■ ***Brain drain and return: The effects on individuals' earnings***

This study examines the earnings effect of leaving the country and then returning. In short, is spending time out of the country generally a good career investment? The lack of empirical evidence on this issue stems from the unavailability of the data required for such an analysis. The paper exploits the unique strengths of a massive longitudinal micro file constructed from tax records to present evidence on how leaving and returning to Canada affects earnings. Models are estimated to allow for the comparisons of earnings profiles of leavers and non-leavers, and basically use

movers' (relative) pre-move profiles as the basis of comparison for their post-move (relative) earnings patterns in order to control for any pre-existing differences in the earnings profiles of movers and non-movers. Overall, leaver-returners have higher earnings than non-movers, but this holds in the pre-move period as well as after. In terms of net earnings *growth*, individuals who were away 2 to 5 years seem to enjoy moderate gains in their earnings levels (in the range of 12%) upon their return, while those who leave for shorter or longer periods do not do as well. These gains seem to be concentrated among those who had the lowest pre-move earnings levels, while those higher up the earnings ladder generally had negligible gains in earnings or even experienced losses. See *Brain Drain and Return: The Effects on Individuals' Earnings* by Ross Finnie, Working Paper Series, 2006, HRSDC-IC-SSHRC Skills Research Initiative, Industry Canada (<http://strategis.ic.gc.ca>).

### ■ ***Migration, human capital and skill redistribution***

Using the 2003 International Adult Literacy and Skills Survey, this paper provides provincial and national perspectives on the skill intensity and schooling of the international immigrant (foreign-born), interprovincial migrant, and Canadian-born populations. On average, international immigrants to Canada have more years of schooling but a lower skill level than the Canadian-born population. Evaluated at the mean years of schooling, the measured skill deficiency of the foreign-born population (the skill-schooling gap) corresponds to 3 years of formal education in Canada. The skills-schooling gap decreases to 2.1 years of schooling in the case of international immigrants with English or French as first language. No skills-schooling gap is seen for the second-generation immigrant population in Canada.

These results suggest that the quality of education, in terms of skills acquired, received by international immigrants to Canada in their home country is typically lower than in Canada. Interprovincial migrants typically have higher skill intensity than the Canadian-born non-migrant population. Overall, the two migration channels have opposite effects on skill disparities across the 10 provinces. International immigration tends to reduce provincial disparities whereas interprovincial migration tends to increase them. However, the net effect of the two channels is clearly negative since in absolute value, the alleviating effect of international



migration is more than twice as great as the effect of interprovincial migration. See *Migration, Human Capital and Skill Redistribution across Canadian Provinces* by Serge Coulombe and Jean-François Tremblay, Working Paper Series, 2006, HRSDC-IC-SSHRC Skills Research Initiative, Industry Canada (<http://strategis.ic.gc.ca>).

### ■ ***The migration of health care providers in Canada***

This study examines the demographic and policy contexts around the migration of physicians, nurses, midwives and psychologists into and out of Canada, using Ontario, Manitoba and Quebec as referents; and attempts to identify gaps that exist between the policies of various institutions and regulatory bodies to match supply and demand of health-care skills and resources. The findings highlight how the key health care migration issue is not so much the emigration of health care providers, which was salient in the late 1990s, but the effective and efficient integration of the internationally educated into the health care system.

The ebb and flow of health care providers into and out of Canada is due in large part to policy decisions and the broader policy context of health human resources. Many of the most recent policies attempt to address the key barriers experienced by internationally educated health care providers. Some of the key partnerships that have emerged in the new programs to reduce barriers have been between the various organizations involved—both government and professional—at the national and provincial level. A key ethical debate that has emerged is whether immigration should be viewed as a solution to skilled-worker shortages or whether attempts should be made to achieve self-sufficiency insofar as the number of health care providers in the country is concerned. See *On the Move: The Migration of Health Care Providers in Canada* by Ivy Lyn Bourgeault, Working Paper Series, 2006, HRSDC-IC-SSHRC Skills Research Initiative, Industry Canada, (<http://strategis.ic.gc.ca>).

### ■ ***International faculty in Canada: An exploratory study***

The current shortage of faculty in Canada has led many universities to enter what is now an increasingly competitive international marketplace. A key concern is to both attract and retain appropriately qualified and experienced faculty. This qualitative study explores the experiences of a group of international faculty

currently employed in six Canadian universities. The majority of faculty in this study believed that moving to Canada would have a positive impact on their professional development. Social reasons relating to quality of life were also a key incentive. While some concern exists that Canadian faculty are moving to the US in search of more lucrative salaries and research funding, the findings also suggest that Canada is an increasingly attractive destination for US faculty. Comments about the recruitment process were generally favourable, although there was some concern about discrepancies between expectations and subsequent professional experiences. See *International Faculty in Canada: An Exploratory Study* by Julia Richardson, Ken McBey and Steve McKenna, Working Paper Series, 2006, HRSDC-IC-SSHRC Skills Research Initiative, Industry Canada (<http://strategis.ic.gc.ca>).

### ■ ***International labour mobility and knowledge flow patterns***

Knowledge flows enhance firm productivity and economic growth. Prior research has found that knowledge flows are highly localized, and this finding has been partially attributed to social relationships that exist between co-located inventors. So, what happens to knowledge flows when inventors move? International labour mobility does indeed seem to influence knowledge flow patterns. Specifically, an immigrant inventor's new country benefits above and beyond the benefits enjoyed by the recruiting firm; this phenomenon is referred to as 'National Learning by Immigration'. Furthermore, the firm that lost the inventor also gains by receiving increased knowledge flows from that individual's new firm and country, which is referred to as 'Firm Learning from the Diaspora'. Moreover, the latter effect is significantly stronger when the mover moves across borders but within the same multi-national firm. See *International Labour Mobility and Knowledge Flow Patterns* by Alexander Oettl and Ajay Agrawal, Working Paper Series, 2006, HRSDC-IC-SSHRC Skills Research Initiative, Industry Canada (<http://strategis.ic.gc.ca>).

### ■ ***Highly skilled immigrants in Canada's high-technology clusters***

Using customized census tabulations, this paper traces the coincident clustering of high-tech economic activity and immigration settlement in Canada's largest cities. Not surprisingly, the largest concentrations of immigrants employed in the high-tech sector are found



within a small group of large cities. Over the 1990s, earnings of immigrants declined relative to those of the native-born working in the high-tech sector. This trend was most pronounced in the largest cities. Controlling for demographic and human capital characteristics, the study found that high-tech immigrants in Toronto do relatively worse than high-tech immigrants employed elsewhere. Immigrants with more education are less likely to be employed shortly after arrival than those with less education. This is consistent with the notion that immigrants face challenges in having their qualifications recognized by employers. As well, certain forms of previous work experience, especially

pre-immigration Canadian work experience and high-tech experience (obtained anywhere), is rewarded with increased likelihood of employment. At the same time, high-tech employers are more likely than others to recognize and reward foreign education and pre-immigration high-tech work experience. See *The Labour Market Situation of Highly Skilled Immigrants in Canada's Hi-Tech Clusters* by Peter Hall, Working Paper Series, 2006, HRSDC-IC-SSHRC Skills Research Initiative,

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#### Perspectives

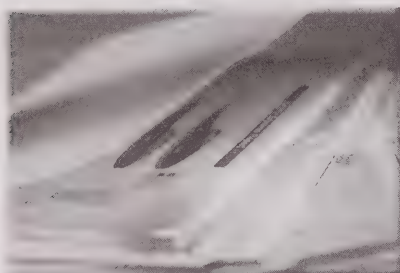
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# Minimum wage

Minimum-wage legislation exists in every province and territory as part of provincial employment standards legislation. The minimum wage is the lowest wage employers can pay employees covered by the legisla-

tion (see *Data source and definitions*). To evaluate the potential impact of any changes, it is important to understand who works for minimum wage and what types of jobs they hold.

## Data source and definitions

The **Labour Force Survey** (LFS) is a monthly household survey of about 54,000 households across Canada. Demographic and labour force information is obtained for all civilian household members 15 years of age and older. Excluded are persons living in institutions, on Indian reserves, or in the Territories.

Every province and territory stipulates a minimum wage in its employment standards legislation. It is an offence for employers to pay eligible employees less than the set rate, regardless of how remuneration is calculated (hourly, daily, weekly, monthly, or on a piecework basis). Likewise, employees are prohibited from accepting pay that is less than the applicable minimum. The minimum wage rate varies from province to province, and a change can become effective in any month of the year.

The self-employed are not covered by minimum wage legislation and as such are not included in the analysis. Unpaid family workers are also excluded.

Other exclusions and special coverage provisions vary and include young workers (Ontario and Newfoundland and Labrador), workers with disabilities (Alberta, Manitoba and Saskatchewan—rarely used), domestic and live-in care workers (New Brunswick, Prince Edward Island, Manitoba and Quebec), farm labour (Alberta, Manitoba, Ontario and Saskatchewan), and home-based workers (for example, teleworkers, and pieceworkers in the clothing and textile industry). Other specific minimums cover non-hourly and tip-related wage rates (for example, Ontario has a special minimum wage rate for employees who serve alcoholic beverages in licensed establishments). A more complete

description of exclusions and special rates is available from Human Resources and Social Development Canada's database on minimum wages ([www110.hrdc-drhc.gc.ca/psait\\_spila/lmnc/eslc/eslc/salaire\\_minwage/index.cfm/doc/english](http://www110.hrdc-drhc.gc.ca/psait_spila/lmnc/eslc/eslc/salaire_minwage/index.cfm/doc/english)).

The number of employees working for minimum wage was calculated using the applicable **minimum wage for experienced adult workers** (also known as the **general adult rate**) for each province for each month of 2005. The average of these 12 monthly observations provides the annual estimate for each province, while the total for Canada is the sum of the provincial estimates.

To determine whether an employee worked at or below the general adult rate wage for each province, hourly earnings were calculated using the reported wage or salary before taxes and other deductions. If the wage or salary including tips, commissions and bonuses was reported hourly, it was used directly. Other wage rates were converted to an hourly rate using the usual weekly hours of work. In principle, tips, commissions and bonuses should have been excluded to capture only those whose true base hourly wage was at or below the provincial general adult rate, but the required information is not collected. The result is a slight downward bias in the number of employees working at or below the official general adult rate set by each province. However, none of the exclusions or special minimum wage rates (such as special minimum wage rates for tip earners and young workers) were used, which introduces an upward bias.

## Lowest proportion in Alberta

In 2005, some 587,000 individuals worked at or below the minimum wage set by their province. This represented 4.3% of all employees in Canada, down slightly from 4.6% the previous year. Minimum wages ranged from \$8.00 per hour in British Columbia to \$6.25 per hour in Newfoundland and Labrador. In addition to having the lowest minimum wage, Newfoundland and Labrador had the highest proportion of employees (6.8%) working at or below it. Alberta, which saw a rate increase of almost 20% to 1.5% in

September 2005 (the first since October 1999), continued to have by far the lowest proportion of employees working at or below minimum wage (1.5%). Alberta's average hourly wages of \$19.76 were second only to Ontario's at \$20.06, and its unemployment rate was by far the lowest (3.9%). Newfoundland and Labrador had one of the lowest average hourly wages at \$16.09 (only New Brunswick and Prince Edward Island posted lower averages), and by far the highest unemployment rate (15.2%).

	Total employees	Minimum wage		General adult minimum wage	Average hourly wage	Unemployment rate
		Total	Incidence			
	'000	'000	%	\$/hour	Date	%
<b>Province</b>						
Newfoundland and Labrador	187.1	12.8	6.8	6.25	June 2005	15.2
British Columbia	1,714.8	95.6	5.6	8.00	Nov 2001	5.9
Nova Scotia	382.5	19.7	5.2	6.80	Oct 2005	8.4
Prince Edward Island	57.7	2.9	5.0	6.80	Jan 2005	10.8
Manitoba	491.0	23.9	4.9	7.25	Apr 2005	4.8
Quebec	3,213.5	148.0	4.6	7.60	May 2005	8.3
Ontario	5,470.0	237.6	4.3	7.45	Feb 2005	6.6
<b>Canada</b>	<b>13,658.2</b>	<b>586.9</b>	<b>4.3</b>	...		<b>6.8</b>
Saskatchewan	385.5	15.1	3.9	7.05	Sept 2005	5.1
New Brunswick	309.3	9.6	3.1	6.30	Jan 2005	9.7
Alberta	1,446.8	21.7	1.5	7.00	Sept 2005	3.9

Source: Statistics Canada, Labour Force Survey, 2005

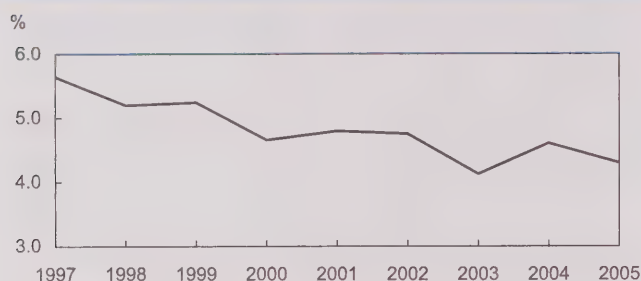
## Share of employees working for minimum wage or less, by province

	2000	2001	2002	2003	2004	2005
	%					
<b>Canada</b>	<b>4.7</b>	<b>4.8</b>	<b>4.8</b>	<b>4.1</b>	<b>4.6</b>	<b>4.3</b>
Newfoundland and Labrador	8.7	5.7	7.5	8.4	6.5	6.8
Prince Edward Island	3.7	3.2	4.5	4.0	4.4	5.0
Nova Scotia	4.9	4.1	4.6	5.9	5.6	5.2
New Brunswick	6.0	4.2	4.2	4.1	2.5	3.1
Quebec	5.4	7.0	6.1	5.1	4.4	4.6
Ontario	4.6	4.1	3.9	3.5	5.3	4.3
Manitoba	5.1	4.5	4.8	4.5	4.9	4.9
Saskatchewan	5.9	4.4	4.8	5.0	3.3	3.9
Alberta	2.0	1.5	1.1	1.1	0.9	1.5
British Columbia	4.5	6.0	7.7	5.6	6.2	5.6

Source: Statistics Canada, Labour Force Survey

All provinces except British Columbia raised their minimum-wage rates in 2005. The number and the proportion of minimum-wage workers increased in six provinces: Alberta, New Brunswick, Newfoundland and Labrador, Prince Edward Island, Quebec and Saskatchewan, while decreasing in three: Nova Scotia, Ontario, and British Columbia. In Manitoba, both the number and proportion remained virtually unchanged.

The proportion of employees earning minimum wage or less dropped slightly in 2005 after edging up in 2004.



Source: Statistics Canada, Labour Force Survey

The proportion of employees earning minimum wage or less declined steadily for many years but recently seems to have levelled out.

### Most minimum-wage workers are women and young

Women accounted for slightly over 60% of all minimum-wage workers, but just under half of all employees. This translated into a higher proportion of women working for minimum wage: 1 in 19 compared with 1 in 30 men. The overrepresentation, although slightly less than the previous year, continued to hold, with rates for women being double those of men in many age groups.

Some 30% of teenagers aged 15 to 19 worked for minimum wage. This age group traditionally has by far the highest rate, and 2005 was no exception. Almost half of all minimum-wage workers were teenagers, a large majority of whom were attending school either full or part time. Another 18% were aged 20 to 24—almost half of them again students.<sup>1</sup> In total, more than 60% of minimum-wage workers were under 25, compared with only 17% of all employees. This translates into an incidence rate eight times that of those 25 and older—15.5% versus 1.9%.

A sizeable proportion (30%) of minimum-wage workers were aged 25 to 54, a slightly higher proportion than in 2004. Women remained the majority of these workers. For these individuals in their core working and peak earning years, minimum-wage work may be less temporary.

The incidence of working for minimum wage declines sharply with age before rising slightly among those 55 and older. The latter reflects some of the low-wage occupations in which working seniors tend to be concentrated: retail salespersons and sales clerks; general office clerks; janitors, caretakers and building superintendents; babysitters, nannies and parent's helpers; and light duty cleaners.

	Total employees '000	Minimum wage	
		Total '000	Incidence %
<b>Both sexes</b>			
15 and over	13,658.2	586.9	4.3
15 to 24	2,373.5	368.3	15.5
15 to 19	889.5	261.3	29.4
20 to 24	1,484.0	107.1	7.2
25 and over	11,284.7	218.6	1.9
25 to 34	3,118.7	63.6	2.0
35 to 44	3,438.0	58.7	1.7
45 to 54	3,151.6	54.7	1.7
55 and over	1,576.4	41.6	2.6
<b>Men</b>			
15 and over	6,949.1	230.6	3.3
15 to 24	1,182.7	153.1	12.9
15 to 19	435.3	110.4	25.4
20 to 24	747.4	42.7	5.7
25 and over	5,766.4	77.5	1.3
25 to 34	1,627.6	21.6	1.3
35 to 44	1,751.9	20.0	1.1
45 to 54	1,555.6	18.1	1.2
55 and over	831.3	17.8	2.1
<b>Women</b>			
15 and over	6,709.1	356.4	5.3
15 to 24	1,190.8	215.3	18.1
15 to 19	454.2	150.9	33.2
20 to 24	736.6	64.4	8.7
25 and over	5,518.2	141.1	2.6
25 to 34	1,491.1	42.0	2.8
35 to 44	1,686.0	38.7	2.3
45 to 54	1,596.0	36.6	2.3
55 and over	745.1	23.8	3.2

Source: Statistics Canada, Labour Force Survey, 2005



## Education makes a difference

Those with less than a high school diploma were five times more likely than those with at least some post-secondary training to be working for minimum wage or less—1 in 8 compared with 1 in 39. Four in 10 minimum-wage workers did not have a high school diploma compared with 1 in 7 employees in general. This is in line with the high rates of minimum-wage work among young people, many of whom have not yet completed their studies.

	Total employees '000	Minimum wage	
		Total '000	Incidence %
<b>Education</b>	<b>13,658.2</b>	<b>586.9</b>	<b>4.3</b>
Less than high school	1,828.8	232.8	12.7
Less than grade 9	352.7	30.7	8.7
Some high school	1,476.1	202.1	13.7
High school graduate	2,868.8	123.8	4.3
At least some postsecondary	8,960.6	230.3	2.6
Some postsecondary	1,233.0	89.5	7.3
Postsecondary certificate or diploma	4,752.1	97.0	2.0
University degree	2,975.5	43.8	1.5

Source: Statistics Canada, Labour Force Survey, 2005

## Where do they work?

	Total employees '000	Minimum wage	
		Total '000	Incidence %
<b>Industry</b>	<b>13,658.2</b>	<b>586.9</b>	<b>4.3</b>
<b>Goods-producing</b>	<b>3,316.4</b>	<b>54.8</b>	<b>1.7</b>
Agriculture	127.3	11.0	8.6
Forestry, fishing, mining, oil and gas	255.6	3.4	1.3
Utilities	124.8	F	F
Construction	698.8	7.9	1.1
Manufacturing	2,109.9	32.1	1.5
<b>Service-producing</b>	<b>10,341.8</b>	<b>532.1</b>	<b>5.1</b>
Trade	2,262.1	194.6	8.6
Transportation and warehousing	661.8	13.9	2.1
Finance, insurance, real estate and leasing	821.9	18.3	2.2
Professional, scientific and technical	682.9	9.4	1.4
Management, administrative and other support	503.8	18.3	3.6
Education	1,050.7	19.0	1.8
Health care and social assistance	1,521.4	22.9	1.5
Information, culture and recreation	618.7	31.1	5.0
Accommodation and food	911.8	167.4	18.4
Public administration	833.1	9.5	1.1
Other services	473.6	27.7	5.8

Source: Statistics Canada, Labour Force Survey, 2005

Minimum-wage work is concentrated in the service sector. Accommodation and food services had by far the highest incidence, with 1 in 5 workers at or below minimum wage. Working for minimum wage is also very prevalent in trade where the proportion was 1 in 12. These industries are characterized by high concentrations of youth and part-time workers, both of whom often have less work experience and weaker attachment to the labour force. Also, these industries generally do not require specialized skills or postsecondary education, and have low levels of unionization. Many jobs are part-time, which may favour a higher presence of women or young people.

Agriculture continues to have one of the higher incidences of minimum-wage workers—1 in 12. Farm labour has traditionally been excluded from minimum-wage provisions. Workers in this industry are not often unionized, but may profit from non-wage benefits such as free room and board as compensation for lower wages.

Highly unionized industries such as construction, public administration and manufacturing were among those with the lowest shares of minimum-wage workers.

## Part-time employment prominent

Minimum-wage work among part-time workers was almost seven times higher than among full-time workers (14.3% versus 2.1%). Almost 60% of minimum-wage workers worked part time, compared with less than 20% of all employees.

	Total employees '000	Minimum wage	
		Total '000	Incidence %
<b>Both sexes</b>	<b>13,658.2</b>	<b>586.9</b>	<b>4.3</b>
Men	6,949.1	230.6	3.3
Women	6,709.1	356.4	5.3
<b>Full-time</b>	<b>11,224.5</b>	<b>239.4</b>	<b>2.1</b>
Men	6,225.5	104.1	1.7
Women	4,999.0	135.2	2.7
<b>Part-time</b>	<b>2,433.6</b>	<b>347.5</b>	<b>14.3</b>
Men	723.6	126.4	17.5
Women	1,710.1	221.1	12.9

Source: Statistics Canada, Labour Force Survey, 2005

## Most minimum-wage jobs are short-term, in both large and small firms, and rarely unionized

	Total employees '000	Minimum wage	
		Total '000	Incidence %
<b>Job tenure</b>	<b>13,658.2</b>	<b>586.9</b>	<b>4.3</b>
1 to 3 months	1,027.6	124.4	12.1
4 to 6 months	909.2	96.8	10.6
7 to 12 months	1,198.0	105.7	8.8
13 to 60 months	4,374.1	188.2	4.3
61 months or more	6,149.3	71.7	1.2
<b>Firm size</b>	<b>13,658.2</b>	<b>586.9</b>	<b>4.3</b>
Less than 20 employees	2,636.7	204.7	7.8
20 to 99 employees	2,263.7	92.7	4.1
100 to 500 employees	2,043.3	56.3	2.8
More than 500 employees	6,714.4	233.2	3.5
<b>Union membership</b>	<b>13,658.2</b>	<b>586.9</b>	<b>4.3</b>
Union member or covered by collective agreement	4,374.4	53.7	1.2
Non-member and not covered by collective agreement	9,283.8	533.2	5.7

Source: Statistics Canada, Labour Force Survey, 2005

More than half of minimum-wage workers had been in their current job for a year or less, compared with less than one-quarter of all employees. Working for minimum wage was most prevalent among those who had held a job for three months or less (1 in 8), and least common among those in a job for more than five years (1 in 83). This suggests that with time and experience, employees move out of minimum-wage jobs.

Four in 10 minimum-wage workers were employed by large firms (more than 500 employees) and another 35% by small firms (less than 20 employees). The incidence of working for minimum wage was highest in small firms—more than double that of large firms. Very few minimum-wage workers (9%) belonged to a union or were covered by a collective agreement, compared with almost one-third of all employees. Only 1% of union members worked for minimum wage or less, as opposed to 6% of non-union members. The large number of part-time workers, as well as students and other young people working for minimum wage, combined with their sizeable presence in smaller firms, tends to limit the ability of these workers to organize and command better wages.

## Most minimum-wage workers live at home with their parents

Almost 60% of all minimum-wage workers lived with their parents or other family members, reflecting the large number of minimum-wage workers under 25, many of whom have not finished their schooling. For this group, the incidence of working for minimum wage was more than three times the overall rate. Sons, daughters and other relatives living with family members had some of the highest rates of working for minimum wage, particularly those under 20 and those attending school.

Almost one-quarter of all minimum-wage workers were part of a couple. The incidence rate for this group was quite low—less than 2%. More than three-quarters had employed spouses, the majority earning more than minimum wage.

Other minimum-wage workers included 34,000 who headed a family with no spouse present (almost all with at least one child under the age of 18), 35,000 with a spouse who was not employed, and 35,000 who lived alone. These individuals, particularly those supporting a spouse or with at least one child under 18, may have difficulty making ends meet on a minimum-wage income alone. All three groups saw their numbers and their incidence increase from 2004.

	Total employees '000	Minimum wage	
		Total '000	Incidence %
<b>Total</b>	<b>13,658.2</b>	<b>586.9</b>	<b>4.3</b>
<b>Member of a couple</b>	<b>7,882.2</b>	<b>145.3</b>	<b>1.8</b>
Spouse not employed	1,498.1	34.5	2.3
Spouse unemployed	299.0	8.6	2.9
Spouse not in the labour force	1,199.1	25.9	2.2
Less than 55	771.5	12.7	1.6
55 and over	427.6	13.2	3.1
Spouse employed	6,384.1	110.8	1.7
Earning minimum wage or less	91.6	6.9	7.5
Earning more than minimum wage	5,414.8	84.7	1.6
Self-employed	877.6	19.2	2.2
<b>Head of family, no spouse present</b>	<b>963.6</b>	<b>34.0</b>	<b>3.5</b>
Youngest child less than 18	833.2	31.7	3.8
No children, or children 18 or older	130.5	2.3	1.8
<b>Son, daughter or other relative living with family</b>	<b>2,543.4</b>	<b>338.9</b>	<b>13.3</b>
15 to 19, in school	467.9	166.0	35.5
15 to 19, not in school	335.7	77.8	23.2
20 to 24, in school	220.7	26.5	12.0
20 to 24, not in school	558.5	38.6	6.9
25 or over, in school	57.4	2.3	4.0
25 or over, not in school	903.3	27.7	3.1
<b>Unattached individual</b>	<b>2,233.1</b>	<b>68.0</b>	<b>3.0</b>
Living alone	1,443.3	35.2	2.4
15 to 24	128.9	9.2	7.1
25 to 54	1,063.4	17.5	1.6
55 and over	251.0	8.5	3.4
Living with non-relatives	789.8	32.8	4.2
15 to 24	251.8	18.3	7.3
25 to 54	500.9	13.0	2.6
55 and over	37.1	1.5	4.0

Source: Statistics Canada, Labour Force Survey, 2005

### Note

1 The student estimate is based on an average eight-month academic year (January to April and September to December, 2005).

### Perspectives

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1989–2006

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